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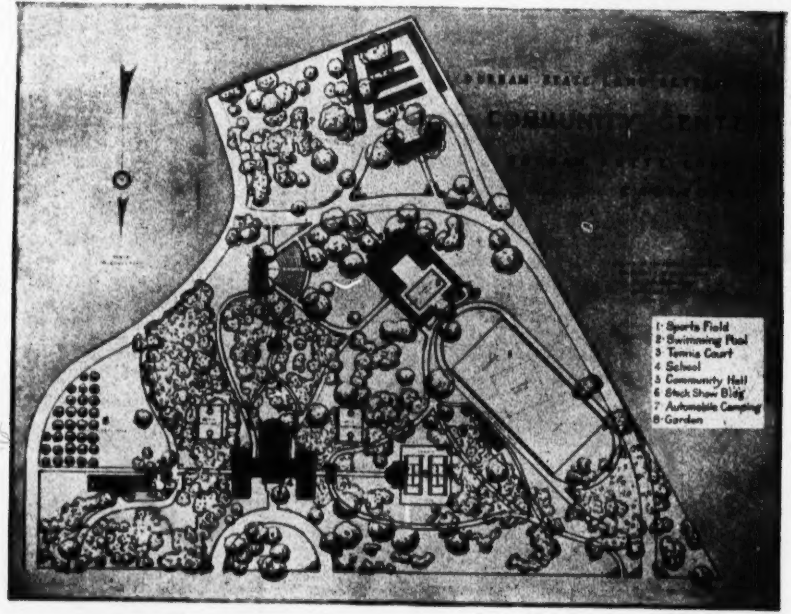
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HELPING MEN OWN FARMS

A PRACTICAL DISCUSSION
OF
GOVERNMENT AID IN LAND SETTLEMENT

BY

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HELPING MEN OWN FARMS

CHAPTER I

STATE AID IN CALIFORNIA DUE TO ECONOMIC AND SOCIAL NEEDS

In 1917 California entered on a new policy in rural development. Under it the State is buying large tracts of unimproved land, cutting them up into small farms and farm laborers' allotments, providing roads, water supply, and other things needful to the comfort and well being of the future owners, and is then selling these farms and allotments to worthy landless people for a small sum in cash with a long time in which to pay the remainder. Each settlement has a competent director who is helping the colonists to grow better crops, to own better stock, to work together in buying and selling, and to build up a sound community life. Settlers are able to borrow money for making improvements on long time at a low rate of interest. They have the advice of the experts of the State Agricultural College in laying out and equipping their farms. In many ways the obstacles which have harassed settlers in the past have been lessened or removed; and the dream of the home seeker has been made a reality.

The State entered on this task because private enterprise was not meeting the State's needs. It was not doing the things which public welfare required.

Although rural life in California has a healthfulness and charm equalled in few other places in the world, the growth of the country was not keeping pace with the growth of the cities. Land prices were rising, the commissions and expenses of private colonizations added greatly to the burdens of the farm buyer who had little capital. There was need for a credit system which would enable poor settlers to improve and equip their farms but none had been provided. There was an urgent need of creating in the country a sound community life, where healthy vigorous American children would flourish, and thus lessen the menace of growing industrial unrest in the cities and the creation of an alien oriental tenantry in the country.

Private colonization had failed in large measure to create the conditions needed to promote growth or ensure a high rural civilization in the future. Its methods were not based on a study of the needs of agriculture or rural progress. This is not a criticism of men or of methods, but a statement of a situation. Private colonization was following the course adopted by the Federal and State authorities. Both had failed to realize that the condition under which men live on and cultivate farms does more than any other influence to shape rural civilization and in the end determine the safety and strength of the nation. The effort and the thought needed to create the best conditions had been dodged by both. Public land had been given away or sold with reckless prodigality. Seven million acres, including some of the best farming land in California, were included in Mexican grants. The Southern Pacific Railway sold the millions of acres of its land grant in any sized tracts to any persons who would buy; and the same policy was followed in the sale of state lands. In 1917, 310 individuals or corporations owned over four million acres of farming land in California. When the State Land Settlement Board wanted to buy land for a new colony, it had offers of 80 tracts varying in area from 4,000 to 12,000 acres. These offers included over 500,000 acres suited to settlement in small farms. Yet all of the land was held by 50 non-resident owners and either not cultivated at all or farmed by tenants.

What happened in California went on in other states. Florida sold four million acres to one speculative buyer for twenty-five cents an acre. Texas paid for its state Capitol with 12,500 farms of 160 acres each. A poor German peasant lad, who knew the power that lay in the ownership of land, was able in one lifetime to become owner of a domain larger than the State of Delaware. There are counties in Illinois and Kansas where half the farming land is owned by non-resident aliens.

These conditions were created because as a nation we have been careless about things that affect the social or economic life of the farm. Instead of trying to find out how much land was needed to make a living area or to restrict ownership to those who would live on the land and cultivate it, we sold land to any one who had the money to pay for it. The kind of civilization that might grow up on it was left to chance.

Ownership of land had not been regarded as a trust. No one had given thought to the influence of land tenure in shaping a people's destiny. When an owner held land out of use or wore it out by wasteful methods of tillage, his action was not looked on as a public evil. The pioneer idea was that each man was to look out for himself and do with land or any other resource as he saw fit as long as he kept within the law. For over a century the nation followed this careless profligate policy. There was no serious objection because there was so much good free or cheap land that any one who wanted a farm could get it. Opinions changed when the fertile free land was gone and the land privately owned began to be so costly that a large percentage of the Americans who sought farms on credit were unable to pay for them.

The best rural life in California is found where land can be irrigated or where enough rain falls to enable orchards or high priced crops to flourish. This kind of land is in demand. The price and the yearly rental of it have risen rapidly in recent years. It now sells without improvements for from $100 to $500 an acre and rents for from $10 to $75 an acre. There were thousands of families in California who had an intense longing to own farms and who were well fitted by character and experience to succeed if they could get a start on good land. Prior to 1917, they could not get this start because they lacked the money required to make it a safe business venture. The buyers needed cash to make first payments on the land, to build houses and barns, to buy livestock and tools, and to put in the first crop.

Thousands of Americans who did not realize the heavy cost of improving and equipping a farm had lost their small capital trying to buy under conditions that made failure inevitable. Others had become embittered as they saw the hope of landed independence grow more dim and remote. Under these conditions had arisen a new and keen competition in tenant farming.

The owners of great landed properties derived their income mainly from rentals. As the demand for land grew, the rent rose through the competition of tenants. The one who would pay the most money or give the largest share of the crop got the land. In these competitions, Oriental farmers or other aliens who could pay high prices because they have a low standard of living, secured control of a larger and larger percentage of the best farming land. As citizens and as builders of rural society, these aliens were in sorry contrast to the State's first settlers, who were the finest type of American citizen this nation had produced. The California pioneer had been a citizen first, a money maker second. He was generous and public spirited to a fault. In contrast, the alien renter had no interest in rural welfare. He had a racial aloofness and he farmed the land to get all he could out of it in the period of his lease. Wherever he displaced the American, he put rural life on the down grade. This is well portrayed by Mr. T. C. Chamberlain, one of the investigators of the State Colonization Commission:—[1]

"There can be no more conclusive proof of the need for a sound policy of land settlement than the social conditions which prevail at the present time in the Placer County fruit belt.

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[1] Report on Colonization and Rural Credit, 1917.

"In the vicinity of Penryn there are eight ranches being run by owners, while sixty are rented. Although the proportion of rented ranches in other sections is smaller, fully 50 per cent. of the ranches for the entire fruit belt are rented. There are about twenty ranches in the vicinity of Penryn whose owners live outside the county. The resident owners in many cases work elsewhere. It is a common experience to find four or five fruit ranch owners working for a salary in a fruit house. Some of the town people say a man cannot get a job in a fruit house unless he owns a ranch and ships his fruit through the house affording him employment. Among the owners who are not employed off the ranches, some spend their time in improving their places, attending to the irrigation, and even working for their own tenants for wages, but the greater number spend their time in their automobiles.

"Not only is the problem one of tenancy and absentee landlordism, but the question of the large landowner enters in. In the Penryn district one company owns sixteen ranches and rents six more. All these ranches are rented to Japanese and a superintendent spends his time motoring from one ranch to another. A number of other ranchers own from two to six places. Five men in the Penryn district own twenty ranches between them.

"The result of these rented ranches, absent landlords, and large holdings is a most deplorable social condition. After looking out over the country surrounding Penryn and seeing the luxuriant development of the fruit ranches and the many large residences, one expects to find a prosperous and thriving community. But on investigation it is found that almost all of these large houses are vacant and in place of a prosperous town there is only a lingering memory of conditions as they used to be. The owners who previously worked their own places and built these homes have now rented to the Japanese and moved elsewhere to live. It is confidently stated by older residents that Penryn was a better town twenty years ago when the surrounding country had not even approached its present development. Socially, the community is dead."

Moreover this kind of tenant cultivation had been robbing the soil of the stored up fertility of centuries. Crop yields were falling off; weed and insect pests were increasing. The kind of agriculture practiced by the tenants would end in rural poverty; and thoughtful minds realized that no change would come until the people who tilled the soil had the same love for it that is felt in France, where keeping up the soil fertility of the farm is a civic duty. There the land is more fertile than it was a thousand years ago and larger crops of grain are now grown than when the country was ruled by the Cæsars.

As long as cheap land was abundant, state aid in land settlement was not an urgent need; but when the fertile free land was gone, those who longed to become farm owners and who were needed as farmers by the public found it impossible to pay for the high values due to the towns, roads, schools, and markets which civilization had created. How hard the struggle was becoming for small farmers and how heavy the burden of fear and anxiety on all the members of the family can be realized only by those who were in close contact with their efforts. There was dire need of capital, credit, advice, and organization; and none had been provided.

What the California Land Settlement Act sought to achieve is outlined in its first section: —

"Section 1. The legislature believes that land settlement is a problem of great importance to the welfare of all the people of the State of California and for that reason through this particular Act endeavors to improve the general economic and social conditions of agricultural settlers within the State and of the people of the State in general." Senate Bill No. 584, Chapter 755.

In order to achieve these results the State created a Land Settlement Board and loaned it money at four per cent. interest. All the money so loaned has to be repaid in fifty years. Each settlement, therefore, has to be a solvent enterprise; it has to pay its way. If state settlement is to give better results than private settlement, it must do it by using better methods and being more efficient. That any public body can cut out waste and expense and thus succeed where private enterprise fails is not a widely accepted view in this country, but the California Land Settlement Act is based on the assumption that this can be done.

The Act saves for settlers the profits of private colonizers, the expense of selling agents, and the high interest rates which settlers have had to pay; it extends and amortizes payments; it provides expert advice and direction; it helps settlers to coöperate in buying and selling; it lessens the time in which each farm may be improved; and it places the owner in a position to earn out of the land enough money to pay all he owes when it is due. These things combined do much to ensure material comfort and financial success which were the main objects in the agitation for this law. What has since transpired leads the board and many careful students of the laws operation to believe that only second in value is the change in the outlook and the aspirations of the people who take part in it. It is made clear to all of them that buying a farm simply to sell it again at a profit is an economic evil, that State aid is intended only for those who wish to secure land as permanent homes. So long as the owner only sojourns on the land until he can " make his pile," he will not work to build up an attractive social life in his neighborhood; but when the farm comes to be looked on as a permanent possession or a family heritage, a stable and attractive rural life will be assured.

The Act provided for a board of five members with power to buy the needed land from private owners. The board could either improve lands before they were offered as farms or homes to settlers, or it could aid settlers to make improvements by loans up to $3,000 on a single farm. For each settlement there was to be a superintendent who would give advice to settlers and help them lessen the time and the cost of bringing their farms into full production by organizing them to build houses and buy livestock and implements at wholesale for cash. Each settlement was to be a planned community with the settlers acting together from the start under expert guidance.

This social land policy, which would give a man of small means an opportunity to own a farm, was a radical change from the ideas and the methods which in the past had shaped rural development. Like a knife, it cut across the view that any one strong enough or shrewd enough to own the earth had a right to do so. It showed that we were beginning to feel, as yet vaguely and uncertainly, that no country founded on land monopoly or menaced by it could be truly free.

The passage of the Act was an immediate challenge to public attention. The *Pacific Rural Press* said truly, "Never in educational history was a lesson so quickly learned and overwhelmingly applied as this land settlement lesson." Before the first settlement at Durham was a year old, it had been visited and studied by officials of ten American States and five foreign countries. It was made the basis of Secretary Lane's plans for soldier settlements. It has affected vitally many men who have been coming to Durham constantly to learn what they should do in their private colonization schemes. With the passage of the Act, the State entered on a new economic era.

We are only just beginning to realize that our future is likely to be determined primarily by the relation of the people to the land. The chaos of Russia has grown out of land hunger; no one fears for the safety of France where nearly half the people are land owners. We have often stated, but little heeded, the facts that we are ceasing to be a land owning nation and that the land born are drifting to the cities. We have yet to learn what the older countries of the world already know,— that keeping people on the land in the years to come must be one of the main endeavors of civilized nations. People cannot be kept on the land where non-resident ownership and tenantry prevail. Nothing short of ownership of the land one toils over will suffice to overcome the lure of the city. At any sacrifice, at any cost, the people who farm the land must be enabled to own it. On such ownership the life of a modern nation may depend.

The main purpose of the pages which follow is to help in the solution of the land problems of the future by describing the conditions and the influences which led to the passage of the Land Settlement Act in California and by explaining the methods and policies which it has brought into operation. Such description and explanation ought to be valuable in extending a policy which gives a new social background to farm life.

CHAPTER II

NATIONAL CARELESSNESS IN THE DISPOSAL OF PUBLIC LANDS

IN order to appreciate the new land policy of California and to understand the need for a similar policy in other States, one must have some definite knowledge of conditions in the past. This may best be gained by a brief review of our country's management of the public lands.

American land laws have dealt almost wholly with the manner in which the public domain should be sold or given away. The tenure in all cases has been that of an unrestricted absolute ownership and there has been no limit to the amount of land one person might obtain. Between two-thirds and three-fourths of the public land has been sold to speculators or granted to railroads and other corporations and to the States. Only a small fraction of it has been transferred directly to cultivators. In the latter case, the farm unit has over great areas been wholly unsuited to the conditions of soil and climate; in some cases being too large, and in others too small to form a living area. There has been no scrutiny of the qualifications and the equipment of settlers to determine whether they had the money, experience, or aptitude to succeed. Although carefully prepared information about the equipment a settler should have, the kind of cultivation he should adopt, and the money he would need to change wild land into a productive farm, would have been of immense value, it has not been prepared. Absolutely no public aid or direction has been given to the settler. In the costly and difficult work of subdividing and developing the wild land of this country, the management of the public domain has shown a distinct lack of constructive purpose.

Our national carelessness as to how land was acquired, held, or used, grew in part out of the immense area to be occupied, and in part out of transplanted English ideas of land ownership and land tenure. These were not democratic. They were, on the contrary, as aristocratic as the English form of government. In England, land monopoly and non-resident landlordism were regarded not as evils, but as a part of the established order of things, like the church, the king, and the nobility.

The rich lands of New York, Maryland, Virginia, the Carolinas, and Georgia were in colonial times held mainly in great estates by semi-feudal land owners. Even after the pioneers crossed the Alleghanies and took possession of the fertile lands of the Ohio Valley, the idea still prevailed that a landed aristocracy should govern the country. In South Carolina, the suffrage was restricted to white men who held freeholds of not less than fifty acres. In New Jersey, the voter had to own real estate worth fifty pounds. In Massachusetts, Connecticut, Maryland, Virginia, North Carolina, and New York, ownership of property, usually real estate, was a prerequisite to the right to vote. To hold office in

South Carolina, it was necessary to own five hundred acres of land and ten negroes or real estate worth one hundred and fifty pounds. A governor had to own one thousand acres of land and secretaries and judges had to own five hundred acres.

A great part of the land sold by the thirteen original States went in large tracts to speculators. The federal government at first fixed the minimum area which could be sold at six hundred and forty acres and made the time of payment so short that practically none but the wealthy could buy. The minimum area which the government would sell was later cut down by preemption acts, sixteen in number, to three hundred and twenty acres. These acts also gave actual settlers the privilege of buying the land at one dollar and twenty-five cents an acre, and made it impossible for speculators to buy settlers' homes over their heads. But the benefits of this move toward social democracy were lost to the poor because restrictions on speculative buying were not made sufficiently rigid and because settlers commonly lacked the money or credit necessary to enable them to erect houses and begin cultivation. As a result, from the time the first settlers crossed the Alleghanies, land settlements were made in a spirit of speculation. This spirit is vividly portrayed by McMaster in the following account of what went on until the wave of western settlement reached the Mississippi:

> "The front of emigration was far beyond Elmira and Bath. Just before it went the speculators, the land-jobbers, the men afflicted with what in derision was called 'Terraphobia.' They formed companies and bought millions of

acres. They went singly and purchased whole townships as fast as the surveyors could locate, buying on trust and selling for wheat, for lumber, for whatever the land could yield or the settler give. Nor was the pioneer less infatuated. An irresistible longing drove him westward, and still westward, till some Indian scalped him, or till hunger, want, bad food, and exposure broke him down, and the dreaded Genesee fever swept him away. The moment such a man had built a log-cabin, cleared an acre, girdled the trees, and sowed a handful of grain, he was impatient to be once more moving. He had no peace till his little farm was sold and he had plunged into the forest, to seek a new and temporary home. The purchaser in time would make a few improvements, clear a few more acres, plant a little more grain and then in turn sell and hurry westward. After him came the founders of villages and towns, who, when the cabins about them numbered ten, felt crowded and likewise moved away. Travelers through the Genesee Valley tell us they could find no man who had not in this way changed his abode at least six times."[1]

At the outset the main idea of the Federal Government in selling land was to obtain money to meet its running expenses. The easiest way to do this according to those in authority, was to sell the land in large areas. Five million acres of fertile land were bartered away in Ohio for two-thirds of a dollar an acre. One million and a half acres were bought by the Ohio Company for one million dollars. Three and a half million acres were sold to private speculators. Two million acres, embracing the spot where Cincinnati now stands, were sold to a rich Jerseyman named Symmes. Thirty-five million acres of the richest soil in the south were sold by the State of Georgia to the Yazoo Companies for five hundred thousand dollars. The government gave no thought to the creation of an economic rural democracy.

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[1] "History of the People of the United States." McMaster, Vol. I, pp. 573–574.

With the purchase of Louisiana, the United States entered on a new era in land settlement. The Louisiana territory was the greatest field for applying democratic ideas of land tenure and land settlement ever presented to a self governing people. Its nearly two million square miles were the largest area of unpeopled, undeveloped country ever brought under the control of a single civil policy. It was a white page on which the nation could write whatever it pleased. Its boundaries included such a wide variation of soil, climate, and products that no general law for its disposal and management could operate with satisfactory results. The plans for its sale and development should, therefore, have had all the aid that science and economics could give.

But the great opportunity for constructive statesmanship was not grasped. The men in control of the land policy of the nation took absolutely no steps toward classifying the lands according to soil and climate and determining living areas for different kinds of farming. They gave no heed to the untold wealth in metals, oil, coal, and sources of hydroelectric power. They had no thought of retaining some control of forest and grazing lands. They left entirely out of consideration plans for irrigation and rights to the water of streams. Any study of the management of the Louisiana Purchase shows how many vital things were absolutely ignored. The movement of people westward to conquer and own this vast area was almost as planless as the migration of the buffalo that fed on its native pastures.

The first thing needed was a classification of lands which would take into account the relation to agriculture of soil fertility and climate. The influence of heat and cold and rainfall and the kind of agriculture best suited to a particular section should have been considered in fixing the size of the farms. Moreover, the agricultural resources were only a small part of the natural wealth of the public land. There were gold, silver, iron, coal, oil, and immense enduring sources of hydro-electric power. There were present, therefore, all the essentials of a diversified and prosperous life. The farm, the stock ranch, the lumber camp, the mine, the store, the railway, and the factory,— all might have flourished side by side. These things were needed: — flexibility in the size of the farms; a tenure which made ownership depend on both residence and cultivation; an organization of settlers which would lead them to think and act together in creating the things needed by communities and in lessening the awful loneliness and monotony of pioneer homes; and a rural credit to provide money for the improvement of farms. They should have been provided by constructive laws.

The framing of such land laws was a task requiring an accurate knowledge of the country and a vision which looked far into the future. The fertile agricultural lands were capable of supporting a dense population, with a high average of human comfort. The pasture lands of the Great Plains Region, if not overstocked, would continue indefinitely to furnish a large part of the nation's meat and wool. Some of the irrigated valleys were capable of growing crops of such high value that forty acres would give an income greater than the highest salary paid a state official; while adjoining areas were so worthless that six hundred and forty acres would not furnish enough food to keep a light-footed and laborious sheep from starving to death.

While no stakes could have been set to mark a definite boundary between the humid and the semi-arid lands, the decreasing rainfall and the lessened and uncertain yield of crops show that there is a twilight zone in which the size of the farm unit should have been large. In this zone, no settlement should have been made until the hazards of climate and the best means of meeting them had been worked out; and settlers should have been warned of the risks of the less favorable climate. Here a widely varied farm unit was required because, as the rainfall diminished, variations in soil had greater influence on crop yield. There are sections in the semi-arid belt in which the farm unit of 160 acres, which was fixed by the homestead law passed by Congress in 1862, might with safety be retained and there are other sections where the area should have been increased to 1,200 or 2,500 acres.

Forest and grazing lands should have been retained in perpetual public ownership. The forests found mainly in the mountain areas, if rightly conserved, would have supplied cheap building material for the nation for generations. The cutting of timber should have been provided for under a license or lease system. Perpetual public ownership of forests under such management as that which now prevails in the Forest Service would have prevented great areas from being acquired by speculators. Speculation has been an unmitigated evil. It has inflated the prices of forest lands in private ownership so that it is now necessary to cut timber with total disregard to future reforestation; for only in this way can lumber be so produced as to repay the huge sums invested.

Another reason for retaining the forest lands in public ownership is that experience has shown that land owned by the government is better protected from fire than land privately owned. Furthermore, some of the forest areas in the arid region should have been preserved because of the influence they exert in regulating the run-off of streams, the flow from forested areas being more uniform and more nearly in accord with the requirements of irrigation and the generation of power. In some cases, then, the cutting of trees should be governed by other considerations than the profits to be made from the sale of timber.

The grazing lands, which include the non irrigable arid lands, like the forest lands, should have been retained in public ownership and leased for pasturage purposes under regulations which would have provided for reseeding. This would have maintained their feeding value indefinitely. Public control would, eventually, if not at first, have insured a fair distribution of the grazing privileges and would have protected the owner of a few cattle or sheep against the encroachment of the great range stock owners, as it does in the forest reserves of to-day. If the grazing land had been held under public control, the range stockmen would have been better able to improve the quality of their flocks and herds, and, as a matter of self interest, they would have preserved the native grasses. Furthermore, the highest return from both irrigable and grazing lands in many sections requires that they be used together.

The irrigable lands should have been located by a careful investigation and in accordance with comprehensive plans. This investigation would have determined the lands which would give largest return from irrigation and which were capable of being irrigated with the least waste of water. The difference in results between the irrigation of good land and the irrigation of poor land is very great. In the same valley some lands will yield under irrigated culture from three to four times as much as will other lands. The poorer areas that could never be profitably irrigated should, therefore, have been left forever arid. But no such result could possibly follow when development proceeded without any purposeful direction.

Along with the selection of the irrigable areas there should have gone a national law providing for public control of the diversion and the use of streams. It should have declared the water of all streams public property and should have granted no rights except the right of use. This use should have been governed or fixed by a license continuing for a definitely brief period. Such a law would have permitted future adjustment to meet changing conditions and would have saved future generations from being exploited by the holders of monopoly or speculative rights.

The conditions of aridity and the growing use of streams for the generation of hydro-electric power make the working of the English common-law doctrine of riparian rights impossible. This right ought to have been abrogated either by statute, or, better still, by the plan followed in the State of Victoria, Australia, which makes the land in the bed of the stream and a strip on either bank, from one to three chains wide, forever public property. According to the Victorian plan the State becomes the sole riparian proprietor and insures to all the people in perpetuity the retention of boating, fishing, and other privileges which ought to be common.

The need for a national water law of the character described has been every year becoming increasingly manifest. The rights to the rivers of arid regions affect the interests of individuals and communities widely separated from each other. Water supplies vitally affect public welfare. They have their origin in rains and snows falling mainly on public land. To make them the exclusive private property of individuals or corporations has caused and will cause endless litigation and controversy. Before all the land which the western streams will irrigate has been reclaimed, water will be turned from one to five times a year upon an area as large as New England with New York added. As population increases and civilization advances the demand for this water will increase in like measure. Ordinary suits in courts of law deal only with particular phases of the problem. The litigation does not concern itself with public rights and interests, and the chief result of decisions when rendered is to furnish grounds for future controversies. Litigation grows from these conditions as inevitably as weeds from a neglected field. Costly and destructive law suits must continue until men realize that only a definite administrative control can prevent great economic injustice.

Legislation aiming at such control was neither attempted nor considered. The great social and economic problems of the twentieth century were not foreseen. The value of direction in land settlement was not realized. The need for classifying lands to meet the climatic requirements of various sections was not understood. The lack of a constructive national policy seems almost incomprehensible unless we remember that the Land Office was far removed from the problems to be solved. Few men in authority had seen the west and few connected with the administration of the Land Office knew anything of western conditions.

The Homestead Act passed by Congress in 1862 gave any citizen the right to acquire 160 acres of land by living on it five years and paying a small filing fee. When the Act was passed, there was open to settlers, the well watered and fertile land of Iowa, the Dakotas, Eastern Kansas, and Nebraska. The law was an expression of opinion that 160 acres of this kind of land was needed to make a living area for a family. But one acre of land in Iowa would give a larger yield of farm crops than ten acres of unirrigated land in Western Kansas or Nebraska.

Bearing these facts in mind, let us review the results of the operation of the Homestead Law in

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TWENTY-TWO ACRE RESERVE FOR COMMUNITY PURPOSES the settlement of the semi-arid region. The retention of the 160 acre farm unit gave settlers no warning of the hazards of agriculture in sections with a yearly rainfall of less than 20 inches. And, even worse, it implied that 160 acres were still a living area. The disastrous results which followed settlement will remain forever a reflection on the Government's land policy. Tens of thousands of people rushed into the semi-arid territory under the delusion that it was a land of reliable rainfall, or soon would become such as the result of settlement and cultivation.

New settlements sprang up in every direction; important towns arose almost in a night. Men hastened from all parts of the country to claim their rights under the Homestead Law. Remembering the prosperity which similar armies of settlers had wrung from the virgin soil of the land of Iowa and Illinois, capitalists lent support to this new outward surge of growing population. Hundreds of millions of dollars were lost. But the loss of capital was nothing in comparison with the bitter disappointment of the settlers themselves. Many of them wasted the most useful and pregnant years of their lives in brave but mistaken persistence in the beliefs that the climate would change as the land came under cultivation and that there was some magic potency in the Homestead Law to overcome the processes of nature. It is hard for one who has never met the ragged, hungry, toil-worn victims to realize how much and how intensely they suffered.

Certain areas in western Nebraska, eastern Colorado, and in the states north and south have been settled and depopulated three or four times. At one time every house in what had been a town of 6,000 people was empty and abandoned. A larger farm unit, combining cultivated and grazing areas, would have insured a permanent and prosperous settlement at the outset.

If the kind of aid and direction which is now given under the California Land Settlement Act had been given to pioneer settlers on arid and semi-arid public land, it would have been an economic triumph of democracy which would have enriched the nation and made country life over a vast area far more attractive. In the absence of such aid and direction thousands of heroic, oversanguine, but uninformed men moved with their wives and children into a region they did not understand and with whose obstacles they could not cope. Their crops failed, they were bedeviled by winds, cold, drouth, and insect pests. They wasted their efforts and lost their hopes and ambitions. A tragically large percentage of them, impoverished and embittered, gave up the land they had fought so hard to cultivate. Nearly all this suffering and loss could have been avoided under a carefully thought out plan of development.[1]

The early land policies were not vicious, but they were heedless and improvident. No one realized that in the near future the nation would need large numbers of people living on the land and content to stay there. No one thought of the great estates as a social menace. Even now we are only beginning to realize the danger of land hunger; we are beginning to realize that the political safety of a country demands that those who live and toil on the land should own it.

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[1] In 1918 it was necessary for the Government to loan $5,000,000 to settlers in Montana to enable them to live through a crop failure. The hard and hopeless conditions of life of these settlers are vividly portrayed in recent publications of the U. S. Department of Labor.

From the end of the Civil War to the close of the nineteenth century the idea in all men's minds was to get public land into the lands of private owners. The Federal Government had given the railroads an area almost as large as the German Empire. It granted to the States, for educational and other purposes, over 200,000,000 acres. The railroads and the states wanted to turn these lands into money. It was believed that the private owner would develop them as a matter of self interest. No one realized that the control of lands would give the Government a social opportunity and a means of shaping rural civilization. Even the agricultural colleges did not foresee how the knowledge and the experience of their faculties could be used to create model communities on the areas given them as endowments, and, instead of entering on a land settlement policy, the college authorities sold the land to speculators for prices far below its real value.[1]

[1]

	Cents		*Cents*
Alabama	90	Maryland	54
Arkansas	90	Massachusetts	66
Connecticut	75	Mississippi	90
Delaware	92	New Hampshire	53
Georgia	90	New Jersey	55
Illinois	70	New York	61
Indiana	54	North Carolina	50
Kentucky	50	Ohio	54
Louisiana	87	Pennsylvania	56
Maine	85	Rhode Island	41

The colonizing of these great properties was usually turned over to selling agents who had no knowledge of agriculture and no interest in the buyer beyond his payments. Agents held out to clerks and artisans roseate hopes of the money which could be made by buying lands as speculators bought corner lots in booming towns; not by farming them, but by reaping the profit the settlers ultimately would bring. When the ignorant buyers were confronted with the heart rending realities, they too often found that to pay for their homes meant that for years they would eat poor food, wear shabby clothes, be unable to educate their children, and spend no money for recreation and pleasure. Worse than the selling methods was the creation of a poor and discontented tenantry, which is described in the Report of the Commission on Industrial Relations, published in 1914:

> "In 1880, Texas had 65,468 tenant families, comprising 37.6 per cent. of all farms in the State. In 1910, tenant farmers had increased to 219,571, and operated 53 per cent. of all farms in the State. Reckoning on the same ratio of increase that was maintained between 1900 and 1910, there should be in Texas in the present year (1915) at least 235,000 tenant farmers. A more intensive study of the field, however, shows that in eighty-two counties of the State where tenancy is highest, the average percentage of tenants will approximate sixty. . . .
>
> "A very large proportion of the tenants are hopelessly in

South Carolina	72	**Vermont**	82
Tennessee	91	**Virginia**	95
Texas	87	**West Virginia**	60

"N. C. Biennial Rept. 1872–79," p. 164.

debt and are charged exorbitant rates of interest. Over ninety-five per cent. of the tenants borrow from some source, and about seventy-five per cent. borrow regularly year after year. The average interest rate on all farm lands is ten per cent., while small tenants in Texas pay fifteen per cent. or more."

The worst feature of our land policy was that it kept the public from realizing the enduring needs of rural life. It was rashly wasteful. It took farmers away from New England, where they were needed, and sent them to the far west to grow crops for which there was no market. The fertility of the virgin soil was recklessly exhausted because other land could be had farther west. Our policy made men restless and migratory and it precluded the love for a farm such as one sees in France, in Denmark, and in Scotland and it precluded also that growth of interest in neighborhood affairs and that pride in one's skill and success as a cultivator which must be in men's minds if land born people are to be kept from moving to the city.

The early land history of California was like that of the rest of the country. The State inherited the land system of the Spanish Government. Under this, large areas had been given away as grants to individuals. There were 712 of these with an area of 7,901,357 acres embracing more than one-fourth of all the land suited to agriculture. Through the purchase of these grants, the making of dummy homestead entries, and the buying of railroad lands and state lands, there was created in California a large number of great farm properties that in time became an obstacle to the State's rural advance.

In the report of the State Immigration and Housing Commission for 1919 the influence of these estates is summarized:

> "Idle and unimproved lands seem to constitute one of the safest and most profitable investments. And, unfortunately for the unemployed, the investment in land does not need the assistance of labor or require the payment of wages. Wealth may thus be invested and large gains realized from it by merely waiting, without its owners paying out one dollar in wages or contributing in the slightest degree to the success of any wealth producing enterprise, while every improvement in the arts and sciences and in social relations, as well as increase of population, adds to its value. By this means we foster unemployment, yet it is considered legitimate business to purchase land for the avowed purpose of preventing capital and labor from being employed upon it until enormous sums can be extracted for this privilege."

This was not what the people of California desired. In no part of this country is there greater civic pride or more thoughtful effort to keep the State a real democracy. There is a wealth of altruistic feeling ready to be enlisted in any good cause. Home owning has always been encouraged and many voices were raised against the drift toward tenantry and alien ownership of land. In California there was a favorable field for a social land settlement policy.

CHAPTER III

AUSTRALIA'S INFLUENCE ON THE LAND POLICY OF CALIFORNIA

THE experiment in planned rural development by California, made in advance of other states and when but little attention had been given to the subject in this country, was in part due to the influence on public opinion of the success of similar action in Australia and New Zealand.

San Francisco is the Pacific gateway to those countries. Travelers had brought reports of the benefits wrought by their social and democratic land policies. Some personal interest was created by the fact that a Californian was chairman of the commission in charge of government aided closer settlement in the irrigated area of Victoria, one of the Australian States. This action in Victoria was due to a desire to secure more satisfactory results from the state owned irrigated works on which large sums of money had been spent. The investment in these works had proved unprofitable. They had not brought the expected changes in agriculture nor an income from operation that had been anticipated. As a final expedient, all of the works had been placed under the management of a commission created for that purpose and this commission was informed that its first duty was to bring an income from the investment.

A study of conditions showed that the financial failure of these works was not due to engineering defects but to a land ownership that made irrigated agriculture impossible. The irrigable area was owned in large tracts and was used mainly for dry farming or for the production of crops which could be grown by the aid of rainfall alone.

Few people lived on the land and little labor was required to cultivate it. The change to intensive cultivation which irrigated agriculture required, meant that estates would have to be subdivided and sold in small farms or that a comprehensive system of tenantry be introduced. A change of this kind required that public opinion be educated. Either the present owners of the land would have to be converted or their lands would have to be purchased and sold to people who would improve and farm them differently.

The owners did not care to sell and few people appreciated small irrigated farms. The profits from crops of high acreage value were not understood; there was objection to incurring the cost of preparing land for irrigation and a reluctance to undertake the skillful painstaking cultivation that was necessary. It was a common expression that the small farm was for the Chinese. The Australian farmer was accustomed to broad acres. He felt that a change to smaller fields was not progress but the reverse. The people who were willing to cultivate small areas had as a rule so little money that they could not improve and develop an irrigated farm unless their meager capital was supplemented by a credit which only the State could afford to extend.

It is not likely that irrigated closer settlement would have been attempted in the face of these obstacles, had it not been for the large and continuing losses which had been incurred by the Government in the operation of the irrigation works over a period of 25 years. This deficit was so great as to call for drastic action.

The basis of the new irrigation policy was the purchase and subdivision of large estates and their sale in small improved farms to actual settlers. These settlers were to be helped by generous credit and by expert advice and direction.

When the results of this policy began to be fully manifest and its success was assured, one realized the contrast with the waste, the unfairness, and the hardship of the unplanned rural development of the western half of the United States. The settlers in the new Australian Colonies made more progress in two years than was made by American settlers in five years, while the percentage of failures in Australia was far less.

It was clear that if the same methods and policies were adopted in America, equal if not better results could be secured. And as year after year, the national benefits became more apparent, the American chairman of the commission desired more and more to introduce the same system into America.

On a visit to the University of California in the summer of 1914, he met the Governor and the Lieutenant Governor of the State, the President of the University and the Dean of the College of Agriculture at a conference arranged to consider what could be done to inaugurate a planned rural development in California. At this meeting it was agreed that private colonization had failed and that the Australian plan, if adopted, would be a success. But Governor Johnson believed that public opinion would not support so radical a change until the need for it was better understood and that in the absence of a strong and favorable public opinion the legislature would take no action. It was his view that the first step should be educational; — the people of the State should be made acquainted with what other countries were doing, and shown that if the same care and practical judgment were used, planned rural development could be made a solvent undertaking.

The Governor's views prevailed. It was decided to inaugurate an educational campaign. The Commonwealth Club of San Francisco became an active factor in gathering data on private colonization. A bill creating a commission on colonization was passed by the legislature in 1915. In the summer of that year, I returned from Australia and became chairman of the commission. After thorough study of what was being done by private enterprises, the commission recommended that the State make an experiment or demonstration in planned rural development on not to exceed 10,000 acres of land, the methods to be similiar to those followed in the Australian States. In 1917, a bill carried into effect the commission's recommendations. The law followed closely the closer settlement act of the Australian State of Victoria.

Victoria and California, although 7,000 miles apart, are alike in climate, products, and people. Both states derived their laws and their social institutions largely from Great Britain. Both were rich in gold and both owed their first development to its discovery. In both the public land was sold or given away prodigally. In both the stock ranch was followed by large wheat farms. The farmers of Victoria and California are more alike in habits and aspirations than are the farmers of California and Massachusetts. Many Americans went to Victoria in the gold rush and remained there to farm. In both States many of the people have followed several occupations; they are open to new ideas, and in the best sense, democratic. Any law or institution which would work well in one country ought, therefore, to work well in the other.

The Victorian law for the closer settlement of irrigated areas went into effect in 1909. In effect, therefore, California started with the knowledge of eight years' successful experience under similar conditions.

The interrelation of the rural development of the Australian State of Victoria and the American State of California goes back much farther. In 1886 the Honorable Alfred Deakin, the Minister of Agriculture of Victoria and afterwards Prime Minister of Australia, came to California. He knew the need of irrigation in Victoria. The alfalfa fields of the San Joaquin Valley, the orange groves at Riverside and Porterville, and the prosperous cities which irrigation had created, made him a zealous advocate of irrigated agriculture in his own State.

The results which won his enthusiastic approval had come mainly from investments of private capital. Owners of land who had built irrigation works saw that the best way to make them profitable was to subdivide the land and create thereon colonies of small farm owners. Some of the irrigation works were built by bond issues of irrigation districts. The taxes needed to pay interest and provide a sinking fund for these bonds made it unprofitable to hold land idle and hastened subdivision and closer settlement.

What Mr. Deakin failed to see was the admirable results in California through the improvement of small farms, gardens, and orchards by their owners. He did not realize the vital significance of this. He made the same mistake that America made when it passed the Reclamation Act without providing for the subdivision of the lands reclaimed, the selection of settlers, or aid and direction to inexperienced colonists. He returned to Australia thinking that the engineering problems of irrigation were the vital ones; that if water was made available it would bring about profound changes in the life of the people and in the methods of farming. Instead of first educating and converting land owners, the Victorian Government built hundreds of miles of canals through pastoral estates where one could ride for miles without meeting a man or seeing a house. If the land owners had been called on to raise the money for this, they would have been prompt to object just as the land owners of certain portions of California would. They did not object, however, because the Government furnished the money.

When these canals were completed their works were put under the management of the land owners. In one district which had over 600 miles of canals, one farmer owned 24,000 acres with only 20 people living on them. Another farm of 36,000 acres was used as a sheep pasture. Another of 23,000 acres was largely covered with timber. There were many properties of from 1,000 to 5,000 acres.

If the scheme were to be made a financial success, the irrigation charges would have to be heavy. Landowners could not afford to pay them unless they adopted intensive methods of cultivation. To do this would require more than ten times the number of people who were available. So the land owners neither levied charges nor adopted irrigated farming. They continued to grow wheat, which in normal years, did not need irrigation. Much of the land was pasture. A typical farmer would grow from 10 to 30 acres of fodder crops to carry his live-stock through the dry season; the rest of the land went unirrigated.

There is no reason to find fault with the land owners because the plan broke down. They were hard working and enterprising; they had made a good living and some of them had been getting rich before the canals were built. They could buy three acres of land for what it would cost them to level one acre for irrigation. At the end of two decades only one acre in five, of the land commanded by channels, was being irrigated. The waste of water and the loss of revenue to the State were enormous. There were less people in some districts than when the canals were built, and less acres of irrigated crops than ten years before. The prejudice against irrigation in the meantime had increased. In a letter to the press one of the farmers voiced their attitude:

> "The plain truth is that there is less water being used instead of more, and there are fewer irrigators. Not that the land-owners are fools and cannot see where their best interests lie, or not because they are too well-to-do to trouble their heads over it, but because the bulk of our land is not suited for irrigation, and as we are, to our cost, becoming aware of this fact, we are letting the water run past in preference to ruining our holdings. The water is cheap enough — too cheap, in fact — but the results obtained from its use, unless in small garden plots, are not such as to induce us to use it freely."

The building of canals had not created irrigated agriculture; cheap water had not helped poor people get land. On the contrary, it had raised land prices higher and made it harder for irrigators to acquire farms. After two decades of watchful waiting, the Government resumed control of the state built works. It created a commission to find what was wrong and to say what ought to be done. The commission saw no way out except for the State to buy the land, subdivide it into small individual farms, and sell these to actual settlers. It reported to the Government as follows:

> "To make irrigation in this State a success, the subdivision of the land into small farms and the sale of these farms to actual cultivators is as necessary as irrigation canals. This subdivision is opposed by the present owners because they do not want to sell their land or to change their farming methods. Most of the owners are pioneers who were here before irrigation was thought of. These men are wedded to their past practices and they neither want to adopt new ones nor make way for those who will. Their feeling is not modified by the fact that the State is willing to pay a fair

price for the land. The question to be settled therefore is: shall conditions be left as they now are or shall the State go ahead regardless of the opposition certain to be met. There is no half way course. It should be either a complete change or none at all."

In place of farms of 300 to 30,000 acres, it would create farms of 20 to 200 acres, although most of the farmers were certain it would end in failure. A large delegation of land owners waited on the Government and agreed to help bring about the change to irrigated farming if the farm unit were made 320 acres, for they claimed that less than 320 acres would not provide a living. They called the plan of helping people get started on small areas "spoon feeding" and said that it would ruin the character of all who were so helped.

The lack of belief in irrigation on the part of the land owners made state aid and direction in settlement a far more serious and difficult task in Victoria than it ever will be in California. There was no hunger for small farms such as exists in the United States. The continent of Australia, with only 5,000,000 people, has an area equal to that of the United States.

Any one could obtain 160 acres of public land upon the payment of a small filing fee and obtain up to 1,200 acres upon the payment of a small annual tax. Land remote from railways could be had in any sized areas and for a very low figure. The State had, therefore, not only to spend large sums of money in buying land, but to find settlers for it.

There were serious misgivings about securing settlers from other countries. They could be obtained only from countries having a white population. It was doubtful whether people of Europe who did not understand irrigation, would venture to the end of the earth to obtain land that could only be farmed through irrigation. It was certain that only those who lacked capital would do so. If these came, they would have to be helped. They would need money to build houses and buy live-stock. The payments on the land would have to extend over many years.

CHAPTER IV

STATE AID IN ITALY, DENMARK, HOLLAND, AND THE BRITISH ISLES

BEFORE proceeding far on the large and costly undertaking of irrigated land settlement, the Victorian Government desired to know what other countries had done in helping poor men become farm owners; to secure all the information available about the cost of improving and equipping farms, about the areas of land that would be needed, and last but not least about the prospects of obtaining the desired kind of settlers from Great Britain and other countries of Western Europe.

To gain this information the Government sent the Honorable Hugh McKenzie, Minister of Lands, and the chairman of the Water Commission to Europe to study state aided settlement in Italy, Denmark, Holland, and Great Britain.

Victoria wanted farmers from northern Italy because they were known to be steady, intelligent, hard workers with a frugality almost beyond belief. They were, moreover, expert irrigators. They would, therefore, be fitted by character and training to get the best results out of the new irrigated farms. Settlers from Denmark were wanted because Danes had already done much to put the dairy industry of Victoria on a paying basis. Many of the new settlers would rely on the income from dairy herds to pay living expenses in making their start, The British Isles were, however, looked to for the main body of settlers for the new development.

The commission was received by the Italian Government with marked courtesy. No effort was spared to make the stay there instructive and pleasant. Visits to irrigated and closely settled country districts were made in company with officials appointed to explain conditions to us. But it was made clear that nothing was to be done to induce farmers to leave Italy. Pamphlets describing Australia had to stay in the custom house; and the commission was requested not to talk to peasants about the charms of the Antipodes. The large movement of industrial workers to North and South America was not forbidden because it meant wealth to the mother country. Laborers could earn in America in one day as much as they could earn in their native country in a week. Some would stay, but many would return in a few years with what in Italy was a fortune; or they would come back in the slack season and spend their big earnings freely. The month of our arrival, 5,000 had returned from the United States and over 6,000 from Argentina and Brazil. In any case, they sent much money back to relatives because family ties in Italy are close. But some of the authorities felt that even the movement of laborers to America was unfortunate, that the stream of money which came from their earnings did not compensate Italy for the bad influence they exerted when they came home. Their high wages led them into bad habits. They often came back with impaired health and in one way or another unsettled the ideas and lives of home keeping folk.

While there was a divided opinion about American emigration, there was nothing but opposition to the movement of farmers to Australia. Victoria wanted farmers who were a success at home and who had some money. Those were the very people Italy was struggling to hold. If any should go to Australia as farm buyers, they would go there to stay. There would be few return visits. Those who went would burn their boats behind them and be lost to the country where they were bred. They would not send their savings back to the homeland; these would be spent in paying for and improving their new farms. It was also apparent that Italy had a rural problem almost as serious as that of Victoria. In southern Italy, the peasants were leaving the old feudal estates in such numbers that the land was going out of cultivation. Lack of farm workers and demands for higher wages were causing great areas to be turned into cattle pastures. This meant a falling off in the home food supplies and a drain on money to buy these products abroad. To check this, the Government was helping to repeople abandoned farms with peasants from Lombardy and Piedmont.

In repeopling the abandoned farms of southern Italy, the Government did not buy the estates and sell them to the new settlers as Victoria proposed to do. Other things being equal, this would have been the simpler and better plan, but it would have raised questions the Government had to avoid.

Many of the large estates in Italy have been held in one family for centuries. Many are owned by princes and members of the nobility. The name of the family and the name of the estate are so linked together that they cannot be separated without hurting the pride and influence of people powerful in political life who are sincerely interested in rural progress. There are also large estates owned by corporations who, while they have not sold their land, have coöperated with the Government in carrying out its plan.

Although the tenant cultivators, according to the Italian plan, are not given titles to the land, they are given a permanent right to its use. They are enabled to build up for themselves and their children homes which are almost as secure as a freehold.

The settler's title may be defined as a grant of possession and use. As long as the tenant pays the rent and keeps the land properly tilled and the buildings in repair, he cannot be turned out. The grants or leases are usually for very long terms and they may be perpetual. They are in some cases inherited like a freehold title, but the tenant cannot sell or mortgage the land except for improvements. Holding such grants or leases are hundreds of thousands of farmers who have been given special privileges under a law passed in 1887.

The tenant, under this law, can mortgage growing crops, stored produce, livestock, implements, or buildings to obtain money for any purposes approved by the Agricultural Council of the Nation. If the land is increased in value as a result of spending the money borrowed, the lien has priority, up to the amount of the increased value, over all claims of the owner and over any mortgages made by the owner, though the mortgage may be prior in point of time.

The tenant may mortgage the property to secure money for building farm homes, barns, fences, and store houses, for drainage and irrigation, for planting vines or fruit trees, for constructing roads, and for preparing land for cultivation. The money loaned is advanced only as the work for which it was obtained progresses.

The rate of interest must not exceed a maximum fixed by the Government and the term of loan can not be less than three years or more than forty-five years. The interest rate may start at 2½ per cent. and increase to 5 per cent. with an average of about 4½ per cent.

The commission visited a farm held under one of these leases. The tenant had come from Lombardy. Before he took the land, it had been unoccupied for years and used only as a cattle pasture. By drainage and irrigation, carried out with money borrowed from a land credit bank, the tenant improved it so that his annual income from sales of milk was over $50,000 a year.

This tenant was a huge muscular figure worthy to sit as portrait for Longfellow's "Village Blacksmith." On the 650 acres which he rented was a huge stone château over 600 years old. Three loads of hay, each drawn by the white oxen of southern Italy, were waiting to be stored away in what had once been the entrance hall. Two hundred and fifty cows were stabled in the basement. The living room of the tenant once had been a banquet hall; several families lived in different parts of the building. The building not occupied by families above the basement was filled with hay. A modern brick dairy barn was being built to house 175 cows.

The money for this had been borrowed from the government credit bank at 2½ per cent. interest. The bank that loaned the money could not obtain it at this rate, but the difference between the current rate and that paid by the tenant was made up by the Government,— this bonus being justified by the increased taxes from the property and the gain in food production.

The land when taken over by the tenant was waste; at the time of our visit it was worth between $500 and $600 an acre. On the marcite fields and on some of the alfalfa fields seven crops a year were being harvested.

Ninety families, 230 persons, lived on and were permanently employed on the property. Laborers were paid 80 cents a day with something more in harvest time; some had houses, others had lodgings in the château without rent but they boarded themselves. In addition to their homes, they had land enough to raise their own vegetables and keep some pigs and poultry.

The social standing of the tenant farmer in Italy is high. This tenant had been decorated twice by the King and made a "Companion of the Order of Labor." That is a distinction worthy of democracy. The Pope had given him an autographed portrait.

The gain to Italy and to the people of the country by making the position of the tenant an honorable and permanent one and by helping wage earners to become independent cultivators, has been great. Nevertheless, at the time of our visit, the wages of the farm laborer seemed pitifully small, though

FARMYARD IN ITALY

they were higher than they had been a few years before. The head of a family was paid from $125 to $175 a year with his house and garden land free. Others were paid from 60 cents to $1.00 a day; these included many women. If it were not for the hope of being able to cultivate their own fields, which the government credit policy makes possible, the outlook for Italian rural folk would be gloomy.

The Victorian Government knew that state aided settlement in Denmark, even more distinctly than in Italy, had been a conspicuous success. The commission desired to find out what features of the Danish plan had most to do with this result and also to arrange with the Danish Government for advertising Australia's opportunities. It was hoped by this means to secure a large sprinkling of Danes among Victoria's new settlers. The Danes who had settled in Australia had done well and were greatly liked. There was a Danish club in Melbourne, made up largely of people who had country interests, and its members were strong supporters of the Government's closer settlement policy. They were anxious that their countrymen should take advantage of the chance to secure homes which the Australian policy would afford.

Half a century ago land in Denmark was held mainly in large estates. The small land owning farmer did not exist. Ninety per cent. of the land was cultivated by tenants. Now Denmark is a nation of small farms owned by their cultivators. *Tenantry* has almost ceased to exist. This change has been brought about mainly by the aid given to poor men by the State and by long time loans of the farm credit banks, which resulted from the Government's policy of stopping the movement of labor away from the farm.

The young men and young women of the country were going to the cities or to America in such large number as to cause a serious national menace. The land owner saw ruin ahead, but there was ample reason why the farm worker did not like his life or its future prospects. His wages varied from $1.00 to $2.25 a week with board and lodging provided. He was paid from 60 cents to 75 cents a working day where he boarded himself. The unmarried laborer had a little house with a garden large enough to grow vegetables. For this he paid a rent of from $15.00 to $20.00 a year. His meager wage was in sorry contrast to the earnings of artisans in the cities or of countrymen who had emigrated to new countries. His pay afforded no hope of his ever having a home of his own and, as a result, he sought distant and greener fields.

To make the home outlook more hopeful, the State passed a law to help laborers buy farms. At first the laborer was afraid that it was a scheme to tie him to his employer. But he soon began to understand its advantages and the scope of the act was then broadened so as to include artisans, machinists, and factory workers in the nearby towns. When it was seen that large returns could be had from a few acres, efforts were made to increase the area enough to enable a man to make a living by working on his own land. This caused a complete change in the character of settlement; the movement ceased to be one to provide homes for wage earners and became one to enable poor families to support themselves on their own land.

The first law was passed as an experiment. It was to be in effect only for five years. At the end of that period, the results were so satisfactory that the law was continued for another five years and its scope broadened by an amendment which made farms and loans larger. In 1909, the law was again amended so as to permit the purchase of larger farms and its operation extended for a third period of five years. In 1914 it was again extended for a fourth five-year period. Under the first law (1899), 20 acres were the maximum area which a settler could buy and some of the farms were as small as a quarter of an acre. Under the next law (1904) the maximum was increased to 30 acres. Under the third (1909) no maximum limit was placed on the acres, but a limit of $1,800 was placed on the amount of money which the State would advance. In 1914 a minimum limit was put on the acreage. The State would no longer finance a farm of less than one hectare (2.47 acres). The maximum amount of the loan was raised to 16,000 crowns ($4,432). Thus the law has shown a constant tendency to help finance larger areas. Also the yearly sums provided have grown as the nation has seen the benefits of the policy. In the first five year period 2,000,000 crowns a year were appropriated. In the second period the yearly appropriation was raised to 3,000,000 crowns; the third law raised it to 4,000,000 crowns a year, and the fourth to 5,000,000 crowns. To-day the yearly outlay is two and one-half times what it was when the experiment began.

At first no attention was paid to what the applicant knew about farming. Men who got farms were expected to work mainly for others; therefore payments to the Government would depend not on the cultivator's skill, but on the savings from his wages. But, as farms increased in size, the income of the settler and his ability to pay the government came more and more to depend on the way his own farm was cultivated. The personal fitness of the farmer became, therefore, the chief factor in the scheme's success. Now every approved applicant has to satisfy the authorities that he is a good personal risk. All who secure farms must be at least 25 years of age. They must have had agricultural experience. They must present certificates of character and of good conduct.

Under the first act the settler was required to have one-fifth of the money required to pay for and improve the farm. Later, when the size of the farms increased and the cost of their equipment became greater, the settler was required to have only one-tenth of the cost of the completed farm. Up to 1914 the settler paid each year 3½ per cent. of the cost of the farm. This was 3 per cent. interest and ½ per cent. on the principal. It would pay off the debt in 65 years. In 1914 the rate of interest was increased to 4 per cent. The Government now provides 40 per cent. of the money out of current revenues and 60 per cent. is furnished by the State Land Bank. This bank can and does at times assign some of the loans to the Danish Mortgage Bank. It can sell them at par because the interest rate is below the ruling one; so the mortgage bank takes these loans at about 80 per cent. of their face value. This loss falls on the government and the state believes that the national benefits warrant it.

When the main idea was to lessen the unrest of farm laborers, large land owners supported the government's policy. Later on, when the farms became larger and took all the time of their owners, the act hurt instead of helped the labor supply of the larger farmers. Now they oppose the act. It is natural for the owner of 500 acres to look on 10 and 20 acre farms with contempt. The little fields and small operations seem trivial. The small farms have interfered with hunting and other privileges. There is no pheasant shooting on 10 acre farms. Fox hunting ceased to be a pastime when closer settlement became the rule.

At present, the demand for farms is far beyond the supply and as the Government cannot provide the money needed to finance settlement, it is being more and more financed by the private credit banks.

The buyers of small farms soon learned that these had to be farmed better and in a different way from that followed when they worked for wages on the large estates. A kind of farm management and grouping suited to the few acres had to be worked out, and to help do that 160,000 people, each struggling to pay for his 10 or 20 acres, raised money to buy the land and erect the buildings of the farm school at Odensee, where their kind of agriculture could be studied and taught. The school is attended by people of all ages. In summer, its rooms are filled mainly with women, in winter with men.

Everything about the buildings and grounds is of the plainest character, but there are few if any other places where 32 acres of land are put to better use. This small area was all that the available funds would buy. The land is divided into the school grounds and two farms typical of the Danish closer settled areas. One of these has 5 tondeland, a little over 6¾ acres, a common area for the man that does all his own work. The other is a farm of 18 acres. The superintendent thought that on the small farm, a peasant ought to be able to keep his family and to have about $400 a year clear. On the 18 acre farm, he ought to keep his family, pay for all labor, and have a net income of about $800 a year. The 6¾ acre farm and the 18 acre farm at the school were each run as the peasants were advised to run their farms. Each farm had its barn and its cow, pigs, and chickens; and the land was planted to the crops which the peasants were advised to plant. In this way a valuable record of actual returns from year to year has been secured.

About the time of our visit, Denmark was visited by a commission of Scottish farmers. It secured reports of incomes from many of the small farms created by the State and thought the returns were small; but we did not think them small when compared to what a peasant would earn if he worked for wages. On one farm of 8¾ acres the net return was $300; that is, this was left after paying all expenses including interest on the investment. It gave the owner much of his food and about one dollar a day as wages. If he had worked for another farmer, he would have been paid from fifty cents to seventy-five cents a day for the time he worked; idle days he would have earned nothing. Out of his wages he would have had to pay for his food and rent for his house. In any event the desire to escape from the status of farm laborer is strong. The Government cannot provide half the money needed to finance those who have saved enough to pay the required one-tenth of the purchase price.

From the school we visited a holding farmed in the typical Danish fashion. The four acres were divided into six plats. Two were growing grain crops, the other four had crops of oats, barley, and clover. On this farm there were two cows, one horse, two hundred and twenty hens, four ducks, and some pigs. During the past year there had been sold from this farm:

	Kroner
7 pigs (to a bacon factory)	315
2 fat calves	100
Eggs (to a coöperative society)	741
Fowls	110
Ducks	78
Milk (to the coöperative dairies)	510
Total	1854 or $515

From these four acres the owner had had a part of his own living and 200 chickens still on the farm and not credited were worth about $30. Five hundred and fifteen dollars does not seem a large income, but, if the owner of this place had worked for wages at the rate paid farm laborers, his income would have been less than half of this and he would have lacked the satisfaction of being his own boss.

The 6¾ and 18 acre typical farms at the Odensee School carried the following live-stock:

	6¾ Acres	18 Acres
Cows	6	14
Heifers		4
Calves		1
Bulls		1
Horses	1	2
Pigs	18	43
Poultry	100	200
Bees	5 hives	20 hives

The commission felt, that, if men in Denmark could make a living on from 10 to 20 acres in the rigorous climate and on the naturally poor soil of that country, where stock has to be housed in winter, where the growing season is short, where taxes are high, and where land costs three or four times as much as it did in Victoria, closer settlement ought to be a complete success in the latter State where two crops a year could be grown, where housing of stock was not required, and where a much wider range of valuable crops could be grown.

There was no question as to the success of the Danish Closer Settlement Act, though there is a belief that with the increased size and cost of farms, there should be an increase in the payment made by the settlers. A first payment of one-tenth was ample when farms cost little and when the larger part of the purchase money was to come from wages. But the larger investment which the State is now making for the settler, leads those who have given most attention to a settler's efforts to believe that he should not try to pay for a farm of over twenty acres unless he has on hand one-fifth of the purchase price.

The farmers of Denmark have taught the farmers of the rest of the world how to coöperate in buying and selling and to realize the benefits that can come from this. If it had not been for their coöperative creameries, coöperative baking factories, and coöperative egg marketing associations, which enabled the man with 5 or 10 acres of land to get a fair price for his small supplies, the movement to make poor people land owners in Denmark would have failed. On the other hand, if Denmark had remained the home of dissatisfied tenants and poorly paid farm workers, its farm schools, its coöperative associations, its hopeful confident spirit would not exist. These were all born out of hunger for land and out of the hope and ambition which land ownership created.

The Danes look upon the land as a principal means of livelihood which should be consecrated to the upbringing and home life of a healthy, contented, and numberless rural population. They hold these results to be of sufficient value to warrant the expenditure of some public money. The Danish view has been well stated by Mr. Niels Pedersen Nyskov, a former member of the Danish Parliament:

" The law, as I know from experience, has apparently resulted in a very considerable improvement in the condition of the land workers. Their progress during the last ten years has been very great. The soil, which when taken over was often in bad condition, has been well cultivated, the value of the stock (on their holdings) has been more than doubled, and the buildings have been improved and where necessary enlarged. Only an able body of housemen (i. e. small-holders) could have attained to this result, but a great deal has been done to improve this class. The State contributes to their education at the Housemen and other schools, and the Housemen Unions, which are supported by the State, also do good work by means of the general education of their members. These housemen also receive grants to enable them to travel for the purpose of study. The land owned by the housemen is as a rule the best cultivated and gives the best results. The cattle and the pigs on these little holdings also return a proportionately larger profit. The good results of the establishment of these independent housemen holdings will grow clearer year by year, and the sums now laid out in the form of old age pensions and other contributions to the poor will correspondingly decrease. Also the housemen will become more prosperous, able to buy more goods and to pay more in direct and indirect taxes. This system of small holdings also keeps people on the land who otherwise would emigrate. Not the least advantage of the scheme is that a healthier and a better generation will spring from the small-holders than sprang from the landless laborers."

Australia desired settlers from Italy and from Denmark, but of course the main demand was on Great Britain. Four-fifths of the people of Australia call Great Britain home. About one-third came from Scotland. Emigrants from the mother country are therefore at home in Australia and are made more welcome than settlers from other countries.

At the time of the commission's visit, England had not done enough in state aided settlement to offer valuable material for the study of her plan. The interesting point became, then, the attitude of the English country people toward the opportunity to acquire small farms at the other end of the earth.

This attitude was made quite clear by the eagerness with which the people welcomed the English Acts of 1908 and 1910 aiming to provide "allotments" (areas of one acre or less) and "small holdings" (areas of over one acre) as homes for laborers and small farmers; by their willingness to go at the rate of 400,000 a year to seek land in Canada; and by their expressed desire to own land anywhere at any price. Since the time of the commission's visit, it is interesting to note, the English acts have proved their value and have become the basis of the various Soldier Settlement Acts passed since the war began.

Six years after the passing of the act providing allotments or small tracts of one acre or less to be sold or leased to laborers for homes and gardens, 130,526 individuals and 52 associations had been helped to have homes of their own. The 33,523 acres of land bought cost on an average $440 an acre and were leased on an average for $10.50 an acre. The year the war began there were 8,391 approved applicants and two associations on the waiting list.

Up to December 1914 the country councils, which direct government aided settlement in England, had bought 195,499 acres for small holdings; of these 178,911 acres had been sold or leased to 12,582 individual small holders; and nearly 2,000 other holdings had been leased to coöperative societies or individuals. The land cost roughly an average of $160 an acre. The average size of the holdings was 13 acres in England and 30 acres in Wales.

The effect of the Small Holder's Act in increasing production has been marked. While the land acquired is only one per cent. of the land in England and Wales, it contains 15 per cent. of the cultivated land in England and 25 per cent of that of Wales. The people on these holdings are meeting their payments to the Government. In 1914 only 86 tenants in England and 2 in Wales, or less than 1 per cent., were unsatisfactory. The total arrears on 13,500 holdings was less than $250.

Nearly all the land in England acquired for small holdings has been nationalized; the Government holds the title, the settler gets a perpetual right to live on the land and use it. In England this kind of a title is preferred to a freehold, in spite of the statement so often heard in America that the Anglo-Saxon must have an unconditional freehold title. On the home ground all he seems to want is a secure right to live on the land and to improve and use it as his own.

The English experience has shown the advantages of group settlement. The latest report urges that no more settlements be established unless at least 100 families can be grouped. The reason for this is that if the small holders are to earn livings and pay back money loaned them, they must farm the land better than it was farmed before. If the small farmers simply copy the methods of cultivation followed on large farms, their returns will be too small. After they have obtained their holdings, even when they have come from farms, they need to be trained in intensive cultivation and in marketing their products; in other words, they need in England to be educated as much as they do in Denmark. But the necessary education can be given profitably only to organized groups of at least 100 families.

The Government has found it worth while to provide $100,000 a year to pay teachers and organizers of small holders. In addition much has been done by the Agricultural Organization Society and other societies to train the people to think and act together in matters affecting the general welfare; and by so doing they are getting results that they could not get if each individual looked out for himself.

The English Government has never been able to provide enough land to meet the demand. In 1914 there were 6,432 approved applicants for whom there was no land.

At the time of the commission's visit to Ireland, the Irish Land Purchase Act, passed in 1903, had been in operation seven years. Already a large portion of the land had passed over to tenants or was held by them on rents fixed by the Government.

For many years before this act was passed, the Irish tenant had been in revolt against non-resident land owners. The Government had attempted to end the disorder by a device similiar to that adopted in Italy; that is, the Government had fixed the rent and the conditions under which the tenant was to hold the land. But neither the tenant nor the landlord was satisfied with this. The tenant wanted the title to the land while the landlord who held his property on terms fixed by some one else wanted to sell it. To solve the problem, the Government placed $500,000,000 in the hands of an estate commission to enable it to finance the transfer of all lands to its cultivators and gave in addition $60,000,000 to enable tenants without money to pay the one-fourth of the purchase price, which had to be paid in cash.

In Denmark and in England the greater part of the land bought by the State was obtained by private bargaining but in Ireland much of it had to be taken by compulsion. The purchase price was based on the rent. A low rental had been fixed by the Government in the hope that it would end the tenant's unrest. Now there was a further reduction of from 10 to 30 per cent. The new low rent was taken as the net income and multiplied by 24 or 26 to give the price for which an owner was compelled to sell his land. The average price paid for about nine million acres of land in Ireland under this compulsory sale plan was $50 an acre, whereas in England under free purchase, the average price was more than three times this sum. The Irish plan was generous to the tenant but hardly fair to the land owner.

The settler who buys Irish state land pays 3½ per cent. a year on the purchase price, 3 per cent. interest and ½ per cent. on the principal. This pays off the debt of principal and interest in 68½ years. Up to 1913, $622,404,180 had been spent. Land is still being bought and settled, but before the purpose of the act, to make Ireland a country of land owners can be accomplished, over one billion dollars will have to be invested by the Government.

As a political and social measure, this act has been a remarkable success. In helping the Irish peasant to realize the long felt aspiration to own his farm, it has changed him from a reckless turbulent fellow to a thrifty peaceful citizen, from a bad farmer to a good farmer. The Irish farmers have become good business men, second only to the Danes in the prices obtained in the English markets. The change, however, was not due to the act alone. One of the main agents in fostering and directing it was the Irish Agricultural Organization Society founded by Sir Horace Plunkett before the Land Act was passed.

This society did enormous good as soon as there was an adequate foundation for coöperation in the peasant farm owners' problems of meeting their payments. Land ownership and rural improvement then went together with a result stated as follows in the report of the American Industrial Relations Commission:—

" For many generations Ireland was one of the most distressed countries in the world. All of its evils were due primarily to absentee landlords and farm tenants. But within the last decade a wonderful change has taken place in the social and economic condition of the Irish peasant, brought about by the enactment by Parliament of what has since become known as the Irish land bill. This Act created a royal commission, with power to appraise the large Irish land estates owned by absentee landlords, at their real and not at their speculative value; to buy them in the name of the government at the appraised value, plus 12 per cent. bonus; to cut them up into small parcels; to sell them to worthy farm tenants, giving some seventy years time in which to make small annual payments on the amortization plan, the deferred payments bearing but 3 per cent. interest. In addition to this, the government made personal loans to peasants sufficient to cover the cost of stock and farm implements, also payable in small annual installments bearing a minimum rate of interest. The government further furnished the various farm districts with farm advisers, trained graduates from agricultural colleges, who act as friend, adviser, and scientific farm instructor to the peasants. Within a decade the wretched and more or less lawbreaking farm tenant has been converted into an industrious, progressive and law-abiding landed proprietor; in fact, he has become so law-abiding that many jails in the farming districts, formerly filled with agrarian criminals, have been converted into public schools."

The reception of the commission in Ireland was not unlike that in Italy. Everywhere there was cordial greeting and a desire that we should know and appreciate the progress that Ireland was making, but no one was willing to help get recruits to settle land in Victoria.

Sir Horace Plunkett said, "This country has uffered far too long from the movement of its people to other countries. If we are faithful to our trust as Irishmen our efforts should all be directed to keeping people here. The new land laws under which small tenant farmers may buy their holdings for smaller yearly payments than they formerly paid as rent is settling the country. The Victorian scheme is full of merit but we cannot spare our people and the stronger the inducement offered them to go away the less we like it."

The editor of *Freemen's Journal* explained that since there was a chance to buy land at home, there was no reason for any farmer's leaving and that neither for money nor for any other inducement would he print anything likely to cause a single Irishman to leave Ireland.

In Scotland, the commission was made aware, as nowhere else, of the tenant farmer's or farm worker's hunger for a piece of land he can call his own. Scotland lacked laws which would help satisfy this hunger. Because of this lack, according to well-informed men, rural Scotland was being bled white by the movement of its people to Canada and Australia. Lack of farm workers was causing many tenants to give up their farms; both workers and tenants were leaving. At every Scottish city visited by the commission, it was interviewed by farmers and farm workers some of whom came 50 miles. They wanted to learn how and when they could secure farms in Australia.

The year following that of the commission's visit, unrest was so general and so many were leaving the country districts of Scotland for Canada and Australia that the Scottish Land Act was passed.

This Act does not provide for the purchase of land but creates a Scottish Land Court which has power to take over estates, divide them into small holdings, and fix the conditions under which the holdings are to be occupied. The tenure of these small holdings differs from that of the small farms of Ireland or the small holdings created by the county or parish council of England. In England the small holder is a tenant of the county or parish council. In Scotland, he is a tenant of the owner of the soil, but the ordinary relations of the landlord and tenant can, by the land court, be removed from the sphere of private contract and the right of the tenant to occupy and improve the land made so secure as to justify him in erecting better buildings, employing better farming methods, and making the best possible use of the land.

The main business of the land court ever since it was established has been the reduction of rents. In the past the land owners had left the Scotch tenants to make improvements; and when these gave the land increased value, the rent was raised. The land court stopped this.

Under the Act of 1911, if a landlord fails to provide the tenant with buildings needed for the proper use of the holding or fails to keep the buildings and improvements in repair, the tenant can go to the land court and be given the status of the owner; that is, he can be given orders to carry the improvements himself and the owner is only allowed to charge rent based on the unimproved value of the land. In some cases, the landlords have made improvements rather than permit the tenants to do so, but in other cases they have preferred to let the tenants do the work even with a reduction of rent.

The board that administered the Land Act in Scotland has a fund of $100,000,000 a year with which to lend money for improvements or to buy land. When it began its work in 1912, there were 1700 applications for farms and at the end of the year over 5,000; about one half wanted farms over 25 acres. Five hundred wanted farms between 10 and 25 acres and as many wanted farms under 10 acres. A still larger number only wanted land enough for a house and garden. Among the first 1700 applications, 400 had a capital under $4,000; 500 between $500 and $1,000 and 750 between $250 and $500.

The members of the Scotch Land Board in their latest report say the Land Act is a great aid to the nation. In giving tenure to small holdings, it brings into cultivation land which otherwise would be used only for pasture. It urges, however, that unless the law be broadened, young men will continue to emigrate to colonies rather than endure conditions at home. The commission found, then, in the political, economical, and social results of state aided settlement in Europe, every guarantee for the success of state aided settlement in Victoria.

CHAPTER V

METHODS AND RESULTS OF STATE AIDED SETTLEMENT IN VICTORIA

WHAT was seen in Europe showed the economic advantages of group settlement. Hence in Victoria it was decided that each area of land purchased should be large enough for homes for not less than one hundred families and that larger areas would be better than smaller ones. Twenty thousand acres seemed to be the most desirable size for a settlement. This would give 500 farms averaging 40 acres each.

$1,250,000 a year had been made available for purchasing land and helping settlers to improve their farms and since this appropriation had been made in advance of actual settlement, a considerable fund had accumulated before it began to be drawn upon. The Victorian Government in carrying out its closer settlement plans, left the selection of the areas to be developed to the State Rivers Commission, for it was necessary to follow a plan which would provide a market for the water of the canals already built. While the State Rivers Commission was the settlement agency, the land was bought by a board which had charge of the crown lands and of lands hitherto bought by the state for various purposes.

All of the land bought during the first six years — 1909 to 1915, was bought by private bargaining. The price paid was usually fixed by the income from the land received by the owner during from three to five years prior to the sale, twenty times the yearly net income being regarded as a fair valuation. About one half the land was bought at the usual selling value. Although a law provided for condemnation, it was so slow and costly in operation that it was never employed.

To get together the land for the different settlements, holdings of all areas within the chosen boundaries from 160 acres up to 36,600 acres were purchased. The table below gives the areas bought and thrown together to form the Rochester Settlement. The Bamawm Estate had been subdivided some years before into 28 farms. These 28 farms were bought and from them 150 farms were made. From the other tracts purchased for the settlement, 130 farms were made. There were 30 families living on the land when the government purchased it. Two hundred and fifty-five of the farms were taken up as soon as the land was thrown open and the remaining 60 within a short time. After this table was prepared some of the large farms were subdivided so that there are now 390 farms in this area.

The land being purchased by the state for settlement was originally crown land. It was first disposed of in large tracts on long time payments and devoted to pasturage. Under these conditions all of the best land had been acquired. But in time, when it was seen that the land could be put to the higher use of wheat raising, there grew a demand for farms that had to be in some way gratified. The state therefore bought back the land from the people holding leases or purchase agreements and opened it

ROCHESTER SETTLEMENT

SETTLEMENT Areas bought.	Areas Purchased Acres.	Number of Properties Purchased and Sub-divided by the State.	Number of Families thereon when purchased.	Date thrown open for settlement.	Number of Closer Settlement Blocks now Occupied.	Increase in number of families.	Number of Closer Settlement Blocks awaiting settlement.	Increase in number of families when all blocks are taken up
Bamawm Estate....	13,400	28	21	1911	150	129	25	154
Nanneella	8,600	16	6	1911	85	79	22	101
Cornelia Creek .... Estate (irrigated portion)	2,500	1		1911	14	14		14
Echuca Estate	2,700	4	3	Aug. 1913	6	3	13	16
Totals	27,200	49	30		255	225	60	285

From $30 to $45 an acre was paid by the State for this land. Settlers can now sell it for from $100 to $150 an acre.

under a law called "free selection." Under this, any selector could take 320 acres, but through hiring people to file on the land, it was possible to obtain much larger areas. Subsequently those who sought to create large estates bought out the selectors and once more devoted great holdings to pasturage. Then the state resumed for the second time land which it had originally owned; in some places the state bought land back three times.

There was a strong feeling therefore that something should be done to prevent aggregation and to insure permanent ownership of land by its cultivators. To bring this about, the commission appointed under the Land Settlement Act decided that a settler's title to the land could not be secured until after twelve years of residence and that after that time the title would contain a clause requiring the owner or some member of his family to live on the land eight months out of every year unless excused by the commission for adequate cause. There was a provision against aggregation of holdings beyond a $12,500 limit in value, but as the husband could hold and the wife and every child over eighteen, this restriction was not immediately felt.

In New South Wales where similar settlements were established a little later, the land was nationalized and a new form of land tenure introduced. The settler who took land did not pay for it but paid a yearly charge which could be taken out as a rent or tax. He had full control over the land and his children could inherit it, but with the conditions of ownership and inheritance, the cultivator had to live on the land.

This title had therefore more of the elements of a fee simple than of a lease. It saved poor settlers from struggling to pay for the land and protected them in the improvements they made. For men without money it was a better plan for putting an end to non-resident ownership than that of Victoria.

The Land Settlement Act fixed the maximum value of an unimproved farm at $12,500. It provided for allotments for farm and industrial workers, that is, for men whose incomes came mainly from wages. In time, the workers' homes were nearly all made two acres in area. This gave land enough to keep a cow and chickens and to grow a home garden. The farms varied from 10 to 200 acres. The latter size was fixed when some of the land was not suited to irrigation. The controlling condition in laying out the farms was the water supply. Efforts were made to fit farms to canals like buildings along city streets.

The subdivision of the land into farms was followed by an appraisement. The appraisement was determined by the price paid by the state for the land plus the expenses of subdivision and superintendence plus a sum to cover loss which might occur through failure of settlers, or through delay in settlement. The amount added to the purchase price was about fifteen per cent.

The land bought by the state in Australia varied in price from $15 to $130 an acre. The selling price ran from less than $20 in some instances to $130.

The conditions of purchase and of loans were as follows:

Payments for land were to extend over a period of 31½ years or a less time, if settlers desired.

The interest on unpaid payments on land was to be 4½ per cent.

Payments were amortized, the annual payment of 1½ per cent on the principal making the total yearly payment 6 per cent; the payments were, however, made semi-annually, there being 63 of these.

Parties could apply for more than one allotment and were advised to make a first, second, and third choice.

Applicants had to be at least 18 years of age.

A cash payment of 3 per cent had to be made on a farm or farm worker's allotment at the time of purchase and a 10 per cent payment had to be made on the cost of a house built by the State.

The State could advance up to $1250 for the building of a home on a farm, or up to $500 to help pay for a home on a farm worker's allotment.

Those having farm workers' allotments were required to complete a house worth at least $150 within the first year and to have the allotment inclosed by a fence within two years.

Actual residence on each allotment was required within six months, but the residence on the farm of the wife, or children over 18 years of age, was considered the same as personal residence.

The purchaser of a farm allotment was not permitted to transfer, assign, mortgage, or sublet his allotment within the first six years after purchase, but a farm worker could do so at any time with the consent of the commission.

Buyers of farms or farm workers' allotments were permitted to pay the whole or any part of the purchase money at any regular payment period.

A deed to the land, regardless of the time of purchase, could not be issued until 12 years after the date of purchase. Up to that time only a purchase contract was given.

In working out plans for helping settlers get a start, the commission tried to forecast what the settlers must do and what expenses they must incur. Whether the farm had ten acres or fifty acres certain equipment would have to be provided and certain improvements made. These would include:

A house.
Buildings to shelter livestock and implements.
One or more cows and one or more horses.
Furniture for the house and tools and machinery for the farm.
The leveling of the land to bring about even flow of water in irrigation.
Small lateral ditches to distribute water.
Boundary and subdivision fences.
Money for living expenses until there was an income.

Estimates of the least cost of these for an unimproved farm of from 20 to 40 acres averaged $3,750, a larger sum than had been realized before this matter was looked into carefully. Very few applicants for land had this amount of money. If such applicants were to be accepted, someone must provide either money or credit. As the government owned the land, it was in the best position to finance its improvement. Money loaned settlers for improvements increased the value of the security, and the enhanced land values which came from better farming made the enterprise a solvent one. If a settler got into arrears and had to be evicted, the price of the farm to the next buyer was increased and the loss recouped.

Direct returns to the government would make state aid a sound plan if most of the settlers paid the amounts agreed upon. European experience showed, however, that few settlers starting without capital could succeed on farms of ten acres or more. Farm workers could pay for their allotments because it was easier for them to meet payments than to pay rent. All were agreed that on the irrigated farms of Victoria, the settler who bought from 30 to 40 acres should have one-fifth the cost of the improved place in money or its equivalent; that the larger the farm, the larger the share of the entire cost the settler should be able to provide. The Victorian government decided that the settler ought to have money enough to pay 3 per cent. on the cost of the land and 10 per cent. of the cost of all improvements and to be able to buy his own livestock. To do that, he would need about $1,500; and each applicant for a farm of 20 acres or over was told that he should have this sum. For areas of less than 20 acres, any one who could pay the deposit and bring satisfactory evidence that he was industrious and that he knew how to farm, was accepted.

Few who applied for farms had money enough for the first payment on the land and the necessary improvements. Their incomes, however, depended on the full improvement of their farms. Without this, intense cultivation could not begin. Each settler could borrow a maximum of $2,500 from the government and nearly every one of them needed this maximum. It was soon seen that the borrowed money could be used to better advantage, if the government directed its outlay; for along with money, four-fifths of the settlers needed expert advice and direction. In other words, the best results were had where service was combined with credit.

The Rochester Settlement will serve as an illustration. There were 285 farms in this settlement of which 255 were taken as soon as the farms could be applied for. The settlers were on the ground waiting for the opening day. These 255 settlers came from Europe, New Zealand, Africa, and North and South America. The farming methods, the seasons, and the crops of their home lands were all unlike those of this new land. If they had been left to build their houses, there would have been 255 heads of families looking for lumber, for windows, for hardware, cement, and brick. Each would have been seeking carpenters, masons, and plumbers. They had no knowledge of the merchants they would trade with or of the artisans they would seek to employ. They were ignorant of local prices and materials and they were in a situation which compelled them to trade quickly. They would, therefore, almost surely have made bad bargains. Their houses would too often be unsuited to the climate and badly built. Some would be shacks, eyesores to the settlement. Meantime while the head of the house was wasting his money, his family would be boarding in a nearby town at heavy expense, or living on the land under conditions that often would make the wife and children ill, down hearted, or homesick.

On the other hand, if the government took charge of house building, it could buy material at wholesale for cash and at low prices. It could build many houses at once and thus permit economy in work and supervision. Settlers could be saved time, money, and hardships in a way which would increase the value of the government's security for the money advanced.

The government arranged, therefore, to build houses for settlers instead of lending them money for this purpose. The first thought was to build the houses before the farms were offered to settlers. This would enable a settler to go into a new home on the new farm. One contract was let for seventy houses and there were several others for smaller numbers.

But the plan of building houses in advance of settlement was seen to be a mistake and abandoned for reasons given below. In place of this there were prepared designs of fourteen houses which varied in cost from $750 to $3,500 and a booklet which gave elevations, floor plans, and estimates of cost. Any of these the state would build with no charge for plans and a very low charge for supervision. To supervise the building work, a competent architect was employed who soon had a considerable staff of draftsmen and supervisors of construction.

The houses were all built by contract, but as large numbers of these were open to competitive bidding at the same time, a number of contracting firms soon gave special attention to them. The leading dealers in building material in Melbourne had the material for the houses most preferred ready for immediate shipment and the whole arrangement for prompt construction was soon well organized. In a few cases, there were delays due to the fact that much of the lumber used came from America. But as a rule, settlers were living in their houses in about six weeks after the contracts were signed.

If a settler did not like any of the stock plans, new ones could be prepared, for which he paid the actual cost; or if he chose, he could arrange to build his own house. Three-fourths of the settlers preferred the houses built by the state. In order to protect settlers' families from serious discomfort and to let them go on their own farms as soon as they arrived, the state bought portable houses and rented them while the permanent houses were being built, at sums which merely paid the expenses of the service.

As the things which led to success or failure became more distinctly realized, the state found it profitable to do more and more for the settler. One of the most important things which the state found it necessary to undertake was the leveling of the land and the building of some lateral ditches on the farm. This was not work for a farmer. It was a task for engineers or men having special skill and experience. To prepare land properly for irrigation requires implements and equipment that farmers cannot afford and knowledge that settlers ignorant of irrigation commonly lack. Even with proper tools, it requires a special knack and experience to prepare the surface of a field so that water will flow over and irrigate it evenly.

The cost of this preparatory work and the need for having it well done increases with the value of crops grown and with the flatness of the slopes. Much of the irrigation land of Victoria had a fall of only one or two feet to the mile, which made the proper location of lateral ditches and the careful preparation of the surface a matter of special importance.

Another reason why the state undertook this work in Victoria at the outset was that the state was in a favorable position to do so. As it was continually buying new land and throwing open new areas, it could enter into contracts for the leveling of large areas with men well equipped for the work and therefore able to do it at a low figure. At the end of five years, land was being prepared for irrigation in Victoria at less than two thirds of the cost of the same kind of work in America; and the difference was due not to the difference of wages but to the superior organization of the work and the skill of the workmen in the Australian State.

It was necessary, too, for the state to furnish expert advice and practical help in buying the horses and cows needed on settler's farms. Without this, the settlers fared badly. Men from Europe wanted dairy herds, but cows were not to be had locally in the required numbers. If they were bought at auction sales, they were too often culls of little value. The state therefore engaged an experienced buyer, who visited remote dairying districts, inspected cattle, and bought them for the settlers in carload lots. This saved time and money so effectively that in some cases settlers from Europe were able to be living in their own houses and making good livings from their own dairy herds, within 30 days after their arrival in Australia.

In both Victoria and New South Wales, aid was given settlers in making their farms the home of pure bred stock. Victoria bought dairy bulls of fine breeding and furnished them to associations of settlers on a yearly rental. It has already been explained that the government helped the settlers buy horses and cattle, but in New South Wales the same arrangement was made with regard to hogs. Men who wished these and had not the money to pay for them, paid a deposit of 25 per cent. and the remainder when the hogs were sold.

Finally the state found it necessary to organize the settlers for coöperative buying and selling and to provide a competent superintendent for each district. It soon became apparent that buyers would take advantage of small farmers kept at home by the unending work of cultivation and improvement if they were not helped to organize to sell as a community.

A large part of the land had been planted to alfalfa. When hay was ready to sell, dealers began to combine and depress the price. A farmer with a small stack of a few tons would have been at their mercy, had not the government come to his aid. But the government organized and helped finance an alfalfa pool, found a good market in India, and broke the dealers' combination.

The farmers of the settlement were organized to market milk to advantage. Later, when orchards came into bearing, machinery to can and dry the surplus products was bought and installed by the government. Closer settlement in Victoria has therefore become a working partnership between the government and the farmers, which is likely to extend over many years.

Every district had as superintendent a man of tact, sympathy, and good business judgment. He had to know the conditions of his district. He was the settler's friend and the government's danger signal. He showed beginners what to do, cheered the despondent, and told the idle and shiftless to mend their ways. He knew who worked and who loafed. He could inform those in authority whether a settler deserved assistance or not.

The superintendent was the most important person in the settlement. He soon became absorbed in his task. No hours were too long, no effort too great to keep his settlement moving and to see that no one failed where success was possible.

Experience with settlers disgruntled by political agitators showed that the commission must know at all times just what progress each settler was making and that this information must be on record in a form to be used. To this end a form was prepared on which the operations of a farm could be entered. It showed the acreage of different crops on the farm and the acres that had been planted by the state. On it were put down all the buildings and those erected since the last report had been submitted. It showed the number of livestock and the income obtained during the last report period. There was a space for the settler to make any statement he desired. If he had grievances he could state them; if he was satisfied he could say so. There was a space for the superintendent to outline the advice he had given the settler. A report of this kind for each farm was prepared by the settler and the superintendent every six months and filed for reference. Usually these reports were prepared on the farm and represented, therefore, the joint knowledge of the settler and the superintendent. On the bottom of each form was a space for a confidential report by the superintendent on the condition of the farm and the conduct of the settler. This was of great service in dealing with settlers who were in arrears. If the report stated that there had been illness in the settler's family or that there had been a crop failure for which he was not responsible or that there was any other worthy reason why he should not be pressed for money, he was not pressed; but if the report stated, as some did state, that the settler did not milk his cows until eleven o'clock in the forenoon, that he spent most of his time in town, or that he belonged to the carpet slipper brigade, then the application for advances of money or postponement of payments was refused.

At first there was some objection by settlers to preparing these reports but in time they came to understand that this review of the situation and the thorough understanding of each individual's condition at headquarters helped to secure fair and sympathetic treatment of every deserving settler; and with this knowledge, the thrifty and industrious all came to be strong supporters of the records. Preparing these reports gave the superintendent the intimate personal knowledge of each settler's affairs that he needed and as it was a part of a system, there was no reflection on individuals as would have been the case if the reports had been required only of those who were in arrears.

In addition to the direct aid to the farmer, which we have just discussed, the government in Victoria extended the state owned railroads or built new ones, sometimes in advance of settlement, so that no district would lack transportation facilities. In this way the government was building up the revenues of one of its agencies and at the same time making it easier and cheaper for settlers to get started.

Moreover, since the purpose was to build up a sound and attractive rural civilization, the commission located and helped to build towns. In Victoria, where the problem was the making over of an old settlement, there was not the opportunity for town building such as there was in the development of a new area, as in New South Wales. Hence it will be profitable to look for a moment at the state built towns of New South Wales, designed by Mr. Harley Griffin of Chicago.

Leeton and Griffin, two of the towns laid out by Mr. Griffin, show how rural life can be made attractive. They have broad streets for business and curving tree shaded streets for residences. The factories are all located so that they can be reached by direct railroad sidings. And there is adequate provision for the life of children as there is a playground in every residence block.

The plans for sewerage, for electricity, for lighting, and for the location of the public buildings and the parks were all made before a single house was erected. When everything was ready, when the streets had been laid out and the blocks cut up into lots, an assessed value was put on business and residence lots, and they were sold at auction to those who would pay the largest yearly rentals. The buyers got a perpetual lease tenure; that is, instead of buying a freehold title which would give them the right to sell whenever and to whomever they pleased, they bought the perpetual right to use the land as long as the conditions of their deeds were complied with. These conditions made it compulsory for the buyer to use the property for the purpose designated and for him or some member of his family to live on the property. The deeds gave descendants of the buyers the right to inherit the leases.

At the outset in New South Wales, the government began to make provisions for marketing the settler's produce. In the towns established in the Murrumbidgee irrigated area in New South Wales, the state established a packing plant, a butter factory, and, a little later, a fruit canning factory. In addition a nursery was started.

It was believed that doing this would increase the value of the state land to be thrown open for settlement later and would thus help to insure to the State the return of the money expended.

In Victoria the government built and maintained a large cold storage warehouse in Melbourne, where all perishable products could be sent and chilled preparatory to shipment to Europe. The government, when requested to do so, took charge of shipments for individual settlers, loaned money to cooperative associations of farmers to build bacon curing factories, and later on, bought and established factories for canning and drying fruit.

In all this aid to settlers, the idea was kept before them that they should, in as short a time as possible, take hold of and manage things themselves, that some of them as soon as possible would be placed on the boards that looked after the settlements. It is certain, however, that the partnership between state and settler is likely to continue for many years; and so long as it is financially sound there is no reason why it should not continue.

CHAPTER VI

THE PRACTICAL TEACHINGS OF AUSTRALIAN STATE AIDED SETTLEMENT

THE development of closer settlement in the irrigated area of an Australian state is of great practical value as a lesson to America. It was such an unquestioned and continuous success as to lead to its rapid expansion in providing homes for returning soldiers. For this purpose, Victoria, with half the area, half the people, and less than half the wealth of California, has appropriated $37,000,000.

This does not mean, however, that no mistakes were made. Changes were made in the original plans as experience showed the need for them. One of these was to end a divided control of the land bought for settlement.

When the new irrigation policy came into effect, there was a land board which for many years had managed the crown or public land and had also subdivided and sold large pastoral estates which the government had taken over. The people who bought these areas continued to practice the only kind of agriculture they understood. The land was cheap, its development did not require a large outlay, and a wheat crop could usually be grown the first season. The knowledge, skill, effort, and money needed to make irrigated settlement a success, were none of them required in the purchase, sale, and development of land that was watered by rain.

The government in its effort to economize, failed to recognize the need for technical knowledge and special experience on the part of those who were to buy, subdivide, and irrigate land and then sell it as small farms. The old land board continued to buy land, subdivide it, fix its price, and choose settlers. It could then wash its hands of responsibilities for results. The new State Irrigation Commission, which had recommended the closer settlement policy and which had to deal with the settlers after they were on the land, was left with little power or influence in the earlier stages of development.

This division of authority caused delay from the fact that some members of the land board did not believe in the new policy and were openly skeptical about the success of small irrigated farms. There was an intention to coöperate. The Irrigation Commission could persuade the land board to buy certain areas but it could not always convince the members of the land board of the need for essential changes in their methods.

In the past, when the land board had bought and sold large pastoral estates, it had added from 10 to 15 per cent. to the cost to pay for surveys, advertising, and administration expenses. When it came to buy and subdivide irrigable land, no increase was made in this percentage. This was a mistake. Fifteen per cent. would not pay for all the things that had to be done. The irrigated farm was small; the contour survey had to be added to the subdivisional survey; ditches had to be located; the surface of the land had to be prepared for the application of water; and settlers had to be taught how and when to apply the water. Experience soon showed that to make the new undertaking solvent, 25 per cent. would have to be added to the original purchase price to cover all the expenses of development.

When the State bought large tracts the soil in different portions varied widely in quality. When the land was cut up into small farms this variation would have to be taken into account in fixing prices, if all the farms were to be made equally attractive. Differences in soil were far more important where land was to grow high priced crops than where farms were to grow grain or grass. The land board did not realize this and at first failed to make enough difference in price between the best and the poorest soil. As a result when an area was thrown open, settlers concentrated their applications on the best land. The farms with poor soil were left to be taken reluctantly by those who failed to get their first choice.

We shall see that this experience was of great benefit eight years later to the men who appraised the farms provided by the Calfornia Act.

After two years experience with a divided control in Victoria the law was amended so as to give the Irrigation Commission full control of settlement on irrigated land.

Another important lesson to be learned from Australia is that the settler should have some money of his own. This was needed to make him a safe risk for the government. The possession of a small capital was in most cases an evidence of industry and thrift. The absence of capital indicated a lack of one or both of these qualities. The man without money was, however, often insistent that he should be given a chance, as he put it, and the commission at first gave way. In nine cases out of ten this was a mistake. It was soon seen that, although the exceptional character might succeed with insufficient capital, or indeed no capital at all, a system based on the government's furnishing all the money and taking all the risks would not do. A solvent system had to be based on what could be expected from the average man.

Experience showed that selling farms to men without any payments or without requiring them to have some capital for development was a mistaken kindness. It tempted the oversanguine and the unstable, who were ready to make the venture because they had nothing to lose if it failed. Furthermore, it was soon apparent that if settlers without capital were to be accepted, the government would have to furnish far more money for development than the $2,500 which the Act authorized the board to lend every farmer.

The theory of building houses for settlers, instead of lending them money with which to build them was sound, but at the outset a serious mistake was made in building the houses before the farms were sold. When applicants began to inspect the farms, it was rare that the house and the farm were both satisfactory. If the land were satisfactory, the house was either of the wrong size or in the wrong place. The dwelling place was regarded as something intimate and personal which the people who were to live in it wanted located and arranged according to their desires. The consequence was that the commission had farms with empty houses on its hands after all of the unimproved places had been applied for. The windows of these houses were targets for the stones of the passersby; in a few months, they took on a neglected unsightly appearance and could not be sold for what they had cost.

The main difficulty in carrying out state aided settlement in Australia, however, was due not to the imperfections of the system or to the mistakes of the commission, but to the very human imperfections of the settlers, incident to ignorance or lack of understanding. In some of the districts objections to the clause of the title requiring a settler to live on his land resulted in serious agitation to remove what was termed a "spotted title." It is particularly interesting to note that Americans who went to Australia did not understand that a sound policy of land settlement could not permit speculation. On account of the restrictions of the Australian titles, few who went from the United States to Australia were willing to take up land. When they found that they must live on their farms and could sell only to those who would be eligible under the Act, nine out of ten refused to buy. They said, "We came over here thinking there was a chance for a quick turn. We thought the development would cause the land to rise in price and we would be able to sell out in a year or two at an advance." In other words, the Americans looked on colonization as an opportunity for a speculative land deal, one of the evils which the State of Victoria aimed to remove.

In every settlement, there were people who did not have it in them to succeed. Some were lacking in judgment. They did not know how and could not be taught how to make money. They would persevere in trying to do what was certain to end in failure or loss. Others were lazy, or were simply discontented agitators who seemed to envy all who succeeded. The idle settler was a serious menace to the scheme. A loafer and a poorly tilled farm went together. Both were sources of irritation to those who worked and who had pride in their community.

The worker, or "battler," as he is fittingly called in Australia, was never turned off his farm if he got behind with his payments through illness, failure of crops, or other causes beyond his control. He was always encouraged and helped. A clear line of distinction had to be drawn between the treatment of these worthy settlers and the slackers and agitators or impractical workers. If settlers who failed from lack of character or practical fitness for farm life were allowed or helped to retain their farms, the neighborhood would soon become demoralized. If they met their payments nothing could be done, but the slacker as a rule was soon in arrears.

Above all, the management of the settlements was a human problem. Success depended quite largely on what those in authority knew of the character and efforts of each settler and this intimate knowledge could only come where settlers were grouped together and were in intimate contact with each other.

Group settlement enabled the superintendent to exert a personal influence and so help mold a community pride, courage, and neighborhood feeling that carried them over obstacles that would have daunted the same people acting alone.

The relation between the government and the settlers had to be intimate and personal. Nearly all of them had been unable to save money in the past. Some did not know how. If loaned money and then left to spend it without advice, a large percentage of the settlers in the irrigated areas would have failed and walked out poorer than they came in. As it was, eighty-five per cent. succeeded and some have already become well to do.

It was essential to keep the board's relation to the settler on a commercial footing. It was made clear that the financial obligations of the settler to the state had to be met. Once this idea is lost or even weakened, state aid becomes a demoralizing influence. There must be constant care and firmness to prevent settlers from seeking to secure more than they deserve through political pressure. About two years after the irrigation settlements were started a number of settlers' protective associations were formed which, as a rule, were admirable; but one of them came under the control of a body of political agitators. It prepared a circular which stated there was no need for settlers to make payments to the government; that if all would refuse to pay the government would be afraid to make wholesale evictions and their debts would be written off.

This was sent to all settlers' organizations and one group of emigrants from Europe refused to make any payments. The commission had to meet this challenge; those who followed an agreed course of passive resistance in refusing to pay were put off their farms. Eviction was unpleasant but absolutely necessary.

The experience of the Australian settlements has brought out very emphatically the value of grouping settlers. Community or group settlement is essential to success in development of this kind because the struggle to earn a living and pay for a farm is a hard one. The profits of agriculture are not great. Success comes through continued industry and thrift; and it helps people who make this struggle to live among others who are making it. In a community of industry and thrift there is no feeling of humiliation; on the contrary, in time there grows a feeling of worthy pride.

Such a community has the spirit of an army. The members do not object to patched clothes if the clothes of their neighbors are patched. A community will go through a period of stress without feeling its discomforts, where an individual family placed among people who own their homes and are not obliged to save money, will feel keenly the economies they must practice to succeed. The psychological influence of group settlement has at the outset great value, which grows even greater as the marvelous transformation effected by the efforts of a community begins to be manifest.

In Victoria, the press, public officials, and farmers in other sections of the state began to talk about the changes that had come in the country around Rochester and Shepparton and in the river counties along the Murray. A community of good farms was far more impressive than a single good farm. It could be seen from the car windows. It caused the towns to grow and improve and caused the state to understand the significance of what was taking place. Larger yields, better stock, and better homes over a large area, created a pride in the country on the part of the people who lived in it, that could never have been built up by scattered individual farms, no matter how good they were.

There are other reasons why group settlement will succeed, when settlement of isolated individuals will fail. Economies in development, such as building houses and preparing land for irrigation, are only possible where settlers are grouped. The advantages of group settlement do not end, however, when people are on the farms. Coöperation and organization in buying, in selling, in education, and in social matters, produce results which would justify group settlement even if there were no other advantages.

After a few years it became evident in Victoria that a great factor in success was speed in improving and equipping farms. The time consumed in getting all the land under cultivation had a direct relation to the farm owner's success. Most of the failures were on farms where the developing period took more than two years. The reasons for this are not obscure. Uncultivated land did not give enough return to pay interest and taxes. Overdue payments, interest, and taxes, added to the first cost of the farm, caused the settler to lose heart. Delay in helping a settler added therefore to the risk and to the ultimate cost of putting him on his feet. In time, it became a part of the program to give prompt and adequate help to the settler who helped himself but to encourage a change in the ownership of the farm, when a settler began to lean too much on the state.

At first the number of Australian settlers was relatively small because of the prejudice against small farms. The first recruits came mainly from abroad, but as the result of intensive cultivation began to be seen, more and more Victorians became settlers. One marked feature was the large number of sons of tradesmen, artisans, and storekeepers who left cities like Melbourne and soon took their places among the best of the farmers. Lack of experience was more than made up for by mental alertness and freedom to adopt new ideas and practices. They became the best pupils of the superintendent.

Three years after the Rochester Settlement was established, when the governor of the state made a visit through the districts, the *Leader*, one of the Victorian agricultural papers, made the following comment:

> "A visitor to this district, at this season of the year, three years ago, would have found the whole country as brown and dusty as the Mallee. Cereals were the only cultivated crops, and the greater part of the land was used as native grass pastures. The few settlers were widely separated from each other, and both the appearance of the country, its productive capacity, and the social conditions, left much to be desired. Now the country is traversed by numerous channels from which water is everywhere being poured on green and luxuriant fields. The returns from the agriculture are already great, and must increase with the better preparation

and cultivation of the land which each year is witnessing. The contrast between the conditions existing three years ago and those of to-day is so encouraging as to make the district worthy of a visit by all those who wish to understand the state's resources.

"To rightly appreciate the attractive conditions of this district and the progress which has been made in three years, one should compare it with the unirrigated country outside. Then one can realize how the country looked when the first settlers began their work. It must be remembered that when the allotments were taken there was not an acre of land graded and prepared for irrigation, that the hundreds of acres now being cultivated were then ringbarked timber paddocks used for pasture, and that to bring the country to its present state of perfection thousands of acres of land had to be graded, hundreds of miles of channels built, and on every block a large amount of work done in fencing and in the erection of improvements. It is this which now makes this country so homelike and attractive."

A review of what had been accomplished in Victoria was made by the Premier in his budget speech in 1914. It shows why the state has made $37,000,000 available for soldier settlements:

"The most gratifying feature connected with the state's investment in irrigation works is the improvement in scientific agriculture. The final success of this investment depends on the returns which can be obtained, and in this respect the state stands in an entirely different position from that occupied five years ago when it made intense culture combined with closer settlement the basis of future development. This was an experiment, the success of which was doubted by many; now it is a demonstrated success. Over large areas in widely separated districts more than ten times as many families are settled in comfortable homes, under attractive social conditions as were there five years ago, and they are obtaining returns from their holdings that even less than five years ago were regarded as impossible. The demonstration that families can be fully employed and obtain a comfortable living on from 20 to 40 acres of irrigable land not only ensures the financial success of our investment in irrigation works, but gives a new conception of the ultimate population which this state will support and the agricultural wealth it will produce. These results are being obtained from growing farm crops, but in several of the Northern areas there are also numerous 5 and 10 acre blocks devoted to fruit and vegetables which are supporting families in comfort. The most valuable feature of the development has been the rapidly extending lucerne areas, and the large returns which are being obtained. In one district 747 acres have been rented this season for a period of six months for $40,125, which is considerably more than the settlers paid the state for the land. The financial returns of irrigators are not more important to the state than the tens of thousands of live-stock which in this drought year are being saved from starvation.

"That progress is being made along sound lines and is destined to be permanent is proved by the fact that it has not been secured under a stimulus of dry seasons. This is practically the first year since the actual commencement of our irrigation schemes that we have not experienced abundant and timely rains.

"Notwithstanding the fact that many of the settlers were inexperienced and lacked capital the small irrigated farm is paying well and doing this in districts having relatively high water charges. The irrigator at Merbein pays $3.75 an acre-foot for water, the irrigator at Nyah pays $3.50 an acre-foot, yet this has had no perceptible retarding influence on the progress or success of these districts."

CHAPTER VII

THE DEFECTS OF PRIVATE COLONIZATION SCHEMES AS SHOWN BY PRACTICAL RESULTS IN CALIFORNIA

AT the end of the nineteenth century California was ready for a new and better rural life. The alfalfa fields, the orange and prune orchards, and the growing acres of vines showed what could be done on the soil of the State with the help of irrigation and scientific culture. The irrigable parts of the State had the resources needed to support a dense population with a high average of human comfort. The climate of the greater part of the State is free from extremes of heat and cold. Few other parts of the world are so well suited to outdoor life. Here the best types of American farmers wanted to make their homes. The charm and the profits of the California farm and orchard were attracting them from all parts of the country.

There was need for a change. The State had in its irrigable sections, large areas badly cultivated and thinly peopled. Out of twenty-eight million acres of farm land, eleven million acres were not being cultivated at all or were being badly farmed. The development of agriculture was not keeping pace with the growth of the large cities.

The large wheat farms gave small acreage returns. The constant production of cereal crops was making the soil less fertile. Few owners lived on the large estates, which, as a rule, were cultivated by tenants or by a shifting and discontented body of farm laborers. The social life was in sorry contrast to that in the small farm colonies such as those about Fresno in the north and Riverside in the south.

In 1903, when the Irish Land Purchase Act went into effect, there was no country in Europe which presented so attractive a field for rural planning as California. Irrigable land, in areas of 10,000 to 100,000 acres, could be bought at from $10 to $50 an acre. Unused water in the rivers was abundant; there was an opportunity to construct profitable irrigation systems on a comprehensive scale. Money for this could be provided by the State or Nation on better terms than those which could be offered by a private corporation.

But the opportunity was not grasped. The experience and the ability of the State's citizens and the wealth of altruistic purpose of the people were not mobilized to plan and direct development for general welfare. Development was left to private enterprise and a selfish and short sighted individualism was not only tolerated but admired. Real estate sharks from all sections of the nation flocked to California to reap a rich harvest out of unwary home seekers. " Caveat Emptor "[1] ought to have been written over the doors of most of their offices. They were for a time the sole rural planners. A State that sought for material progress looked with tolerant eyes on their methods until the wrongs of many deceived colonists began to be understood.

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[1] "Let the settler beware."

Because private enterprise lacked social vision and because the State Government was for the time indifferent to what was taking place and to the need for public direction, many unique opportunities for a development which the world would have admired were lost. One instance is given.

East and North of Sacramento, the State Capital, was the 40,000 acre stock ranch of Mr. J. B. Haggin. He had owned it for many years. The city grew to its boundaries and then had to expand in other directions. Two railroads crossed it; the American River with ample water for irrigation flowed past it. The land was an ideal homesite for workmen in the railroad shops and in other industries. Although some of it is unfit for intense culture, other areas are so fertile and well located that all the products of the semi-tropical and temperate zones can be grown on the same acre of land. On this great domain a trained mind could have created a background for the Capital City of the State which would have been worth crossing the continent to see. If it had been created, thousands would have sought to live there. A garden city like that of Letchworth, England, could have been created with an environment far more lovely and an influence for good infinitely greater.

The owners of the estate had this vision. They tried to induce the city of Sacramento or a committee of citizens to buy the land and make its development a public matter. They were willing to sell the estate at a low price and on terms of payment that would have made a planned development easy. The city and its citizens, however, threw away the oppor-

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PREPARING LAND FOR IRRIGATION

SETTLER'S HOME AT DURHAM BUILT BY BOARD

tunity, because the idea was new and the methods and results of planned development in other countries were not generally understood.

The land was sold to a speculator from an eastern city. He did not live in California; he had no pride in the State's progress and no concern in creating a rural civilization worthy of the State. He bought the land to make money. He cut it up into blocks to suit the purses of other investors or speculators. Land unfit for cultivation was sold as orchard or farm land. City additions were created without any central design. Beauty and convenience were sacrificed. One speculator is reported to have made a million dollars but what the city of Sacramento lost cannot be measured or paid for in money.

About the time the Haggin Ranch was sold to speculators, the Australian State of New South Wales began making plans for settling half a million acres of irrigated land along the Murrumbidgee River. This land was then a sheep run. There were neither roads, railroads, towns, nor people. Families to occupy the farms and towns would have to be brought from distant countries. Life was so crude and primitive that any change would have meant progress; even an unplanned development such as America had seen in the transformation of the country west of the Mississippi would have brought great material results. But instead of leaving roads, cities, and farms to grow without design or direction, New South Wales employed the best talent and experience it could procure to design this development so as to provide all that rural civilization would need.

The manner in which the Haggin lands were dealt with is typical of private colonization all over America. The typical private colonization scheme does not render the kind of service the Nation needs. Private colonization and development is neither cheap nor efficient. It places on many unwary beginners burdens that they cannot afford to carry.

In the past, private colonizers have given little thought to the needs of settlers. They have bought land and sold farms as they would buy and sell corner lots in a boom town. Their ability has been mainly shown in writing alluring advertisements and working out selling devices. Too often the main appeal has been to the American passion for speculation. Clerks, artisans, and business men who knew nothing of farming and never expected to farm, have bought farming areas not to live on them and cultivate them, but to share in the increment which the development by others would bring.

Farmers who go to California from the corn and wheat belts of the East find their past experience of little value in determining what land is worth. In one noted instance, eastern farm buyers were shown land that two years before had been bought for $7.00 an acre. They were told this and also told that the present price was $200.00 an acre; and they were advised to buy because next year it would sell for $400 an acre. This did not seem impossible; for the air was full of stories of money made out of land deals. Many who bought took a profit if there was a rise. If the land could not be sold at an advance, they lost the first payments and the land reverted to the colonizers.

The lack of business judgment shown by some of the buyers when under the influence of the seductive tongue of a good salesman was amazing. One who had only $1,575 agreed to pay $7,500 for a piece of land and put up $1,500 as a first payment. That left him $75 with which to build a house, buy a team, get his farm equipment, prepare the land for irrigation, and pay his living expenses while he was putting in a crop. He lost his money.

Another sanguine home seeker came to California with $1,100, a wife, and four small children. He bargained for 40 acres of land, at $125 an acre, turned over $1,000 as a first payment and then had $100 in cash, a small equity in 40 acres of land, and a debt of $4,000. Before he could begin to earn the money to pay this debt or support his family, he had to have a house, a team, a cow, farm machinery, and at least $1,000 to prepare the land for irrigation. He had neither the money nor any sources of credit. He used his remaining $100 to escape from the State with a vivid sense of the wrong he had suffered.

Between 1900 and the present, land prices under private colonization have risen rapidly not only in California but in other parts of America. In order to succeed, the buyer has to have more and more capital. It has constantly taken more money to make a first payment on a farm. A better equipment is needed to farm high priced land because cultivation has to be more thorough while a crop failure is attended with far more serious results. When farm land sold for $10 or $25 an acre, it could be paid for, and often was paid for, in five years; but when the price rose to $100 or $200 an acre, the settler who would be successful had to have more money at the beginning, a longer time in which to pay for the land, and some source of credit from which to borrow money for equipment.

These facts either have not been realized or have been deliberately ignored by the private colonizing agencies. When the State Colonization Commission pointed out that other countries were giving a far longer time to pay for land and that a far longer time should be given in California, the chief protest came from the private colonizers. They argued that if men thought they could pay for land in five years they would buy it, but if they were told that it would take from ten to twenty years to pay for it, they would refuse to buy.

The interest rate on deferred land payments was usually 6 per cent., but when the settler came to borrow money to improve a farm on which the seller had a first mortgage, he had no commercial security to offer and had to get money from friends or relatives or as a personal favor from banks. Lending money to new settlers had been a bad business for country banks. As one of them expressed it, "It turned bankers into pawn brokers." Their only security was a chattel mortgage on farm implements and live-stock and the time and expense required to look after small loans made it necessary to charge high interest rates.

The State Colonization Commission investigated thirty-two typical colonies, walked with the buyers over the farms, looked into homes, and saw the crops. It secured records of the money settlers had spent and of their incomes from crops. These field studies were supplemented by statistics gathered by Chambers of Commerce in closely settled districts.

In the thirty-two colonies studied by the commission there were twenty-four in which settlement was still going on. The farms were sold without improvements; and since some of those recently purchased still lacked houses and barns, the average cost of the improvements already made was therefore below what it would be when development had been completed.

In the eight older colonies there had been a marked rise in the value of unimproved lands, which showed that the original price charged was not too high. Practically all of the settlers were behind in their payments. Out of nearly a thousand who filled out the inquiry blank of the commission not one had been able to make the payments stipulated in the purchase contract. The settlers were working hard, living frugally, and getting more than average returns from their crops. Failure was not due to agriculture or the settler but to defects in the sale plan.

The average cost of land in the newer settlements was $225 an acre. The average cost in the older ones was $260 an acre. The average time for completing payments was six years and the average interest rate eight per cent. The average debt of these settlers was about half the cost of the farm, or in the new settlements about $4500 on a forty-acre farm. The first year the settler would have to pay eight per cent. interest on the debt and one-sixth of the debt itself, or $1210. In addition, there were taxes, the expenses of the family, the cost of seed and repairs of implements, which would amount to another $1200. The farm had therefore to produce about $60 an acre, and this was far above the returns from agriculture where orchards had not come into bearing and dairy herds had still to be built up.

There were two glaring financial defects in private colonization. The time for paying for a farm was too short and the interest rate was too high. Private colonization showed how methods and ideas persist after the reason for their existence have disappeared. When land sold from ten to twenty dollars an acre, men could pay for it in five years out of the sales of crops. When the debt was small a high interest rate did not matter, but with the high-priced land and the costly equipment needed to farm it in these California settlements, the annual interest payment was more than the cost of the land a few years before. Success could only be had by a complete change in the selling plan.

Under the State Land Settlement Act, the yearly interest payment is five per cent. and the payment on the principal one per cent., or six per cent. instead of twenty-four. The settler can meet this and, knowing it, works with confidence and hope. The settler could not make a payment of twenty-four per cent. and, when he failed, he held his home at the pleasure of the owner of the mortgage, who was usually a stranger. It does not add to the comfort of the family to feel that day after day their toil and sacrifices may go for nothing. Seldom in California is a mortgage foreclosed, if a settler meets his payments and a little more, but far too many have not even been able to do this. They had promised to pay more than a highly improved farm could earn. In many cases they were not able to borrow money to improve their farms even by paying high interest rates. It has been shown repeatedly that two out of every three settlers failed, a percentage altogether too large.

Where settlers failed to meet their payments the land seller lost money as well as the land buyer. Whatever there was of loss and disappointment was rarely due to dishonesty or greed, but to the fact that the social and economic problems of rural development had not been studied, that methods suited to the changed conditions had not applied.

The time given to pay for a farm in countries that have studied farm settlement from the standpoint of the buyer is from six to ten times that granted by private colonizers in California, while the interest rate is only a little more than half. In addition, it has been the invariable practice in countries having planned rural development to amortize the payments. This lessens the amount to be paid in the earlier years.

In the countries having a planned rural development, public opinion has tended to keep the price of unimproved land low. In America, the influence of the speculative colonizer has inflated prices, because he looked to inflation for his profit. This influence, working continuously, has made the price of land in some of the unpeopled, undeveloped sections of America above the price of land in the densely peopled, highly cultivated, and highly improved portions of Europe.

The extremely low price of land in Ireland is due to the fact that the price was fixed by legislation rather than by the productive value of the land, but this was not true in England, Denmark, or Germany, where the land was all bought by agreement.

Where the demand for land has forced governments to buy rapidly, it has tended to inflate prices; but such inflation has been quickly followed by laws to restrict prices. A German official report dealing with this aspect of settlement said in defense of a law to buy by condemnation:

> "Colonization has been made a public matter, because when it was a private matter persons bought land without having funds to pay for it, only to make a profit by selling it again at the first opportunity. Unprincipled middlemen persuaded owners to part with their lands and other professional subdividers of land sometimes unscrupulously dismembered holdings with an utter disregard for economies; and the consequence has been a continual increase in the price of land.
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> "While every other part of the country exerted itself to the utmost to strengthen and augment its agricultural resources by increasing and elevating its rural population, it cannot be considered encouraging that in eastern Germany there are vast territories almost wholly in the hands of a few landed proprietors. The existence of such large landed estates not only hinders the natural progress of the peasant class, but greatest evil of all, it is the principal cause of the diminished population of many territories because the working classes, finding no chances of moral or economic improvement, are driven to emigrate to the great cities and manufacturing districts. Scientific researches also prove that small farms nowadays are more profitable than large; above all, small live-stock improved farms, the importance of which for the nutriment of the people is constantly increasing."

To give effect to these ideas the German Government provided for the compulsory purchase of large estates where these were needed for closer settlement. In New Zealand owners of large estates are permitted to fix their value for taxing purposes, the government having the option of buying the land at this value plus twelve per cent., which is added to compensate the owner for the losses caused by the abrupt transfer. Much of the rural growth and prosperity of New Zealand is due to the small farm homes made possible by this act.

CHAPTER VIII

CALIFORNIA'S FIRST STATE SETTLEMENT

PURCHASE OF THE LAND; IRRIGATION; SUBDIVISION; SELECTION OF COLONISTS; AID GIVEN FARMERS

An account of the growth of the colony at Durham is here given because it is believed that other States will be interested in a record of the obstacles encountered in California and of the means taken to overcome them. The record gives in detail some of the homely helpful acts of the board to promote the well being of settlers.

This chapter will indicate the personnel of the board and describe how land was purchased. It will show how water rights were settled, how adequate water supply was assured to the farmers, and how the land was prepared for irrigation. It will describe how the land was divided into farms according to a soil survey and how the prices of farms were determined. It will deal with the preparation of farms for cultivation, the selection of settlers, the help given to settlers in planning and building homes, and the regard for the health of the community so as to indicate all the steps which changed the single estate to the community of over 100 homes.

The chapters immediately following will deal with the provisions for farm laborers in the Durham Settlement, and with the social progress of the community through coöperation.

As the story unfolds, it will show how great is the difference between the life of any family in a community where each land buyer looks out for himself without a directing hand or a common purpose and the life at Durham from June 1918 to January 1920.

The Durham Settlement has been able to utilize the experience of the Australian States. The former chairman of the Victorian Commission is chairman of the California Board. The superintendent of the Durham settlement had charge of one of the first State Settlements in the irrigated area of Victoria. He brought back to America a working knowledge of what the beginner needs and of the practical limits to what the State may safely attempt to do.

The other members of the board are able business men:— Mortimer Fleishhacker, also a member of the State Commission on Colonization, president of the Anglo California Trust Company and one of the leading farmers of Northern California; Ex-United States Senator Frank P. Flint, lawyer, banker, and an active force in developing farms and orchards of Southern California; Prescott F. Cogswell, farmer, banker, and former chairman of the Agricultural Committee of the State Senate; and Judge B. F. Langdon, lawyer and farmer, who has been succeeded by E. S. Wagenheim, a man of large experience in farming and stock-raising. These men knew from actual experience how much it costs to change raw land into an improved irrigated farm.

In the appointment of this board, Governor Stephens, who is a warm supporter of the policy, saw clearly that the first thing a demonstration had to do to win popular support was to pay its way. If settlers were given any money or if money were lost in the venture, state aid in settlement would be short lived. The Governor, therefore, sought men who knew how to maintain a business undertaking in a state of solvency.

The Legislature advanced to the board $260,000. Of this, $10,000 for preliminary expenses is not to be repaid; but $250,000 is a loan to be repaid in 50 years with 4 per cent. interest. With this money, the board bought 6,300 acres of land in Butte County seven miles from Chico, a city of 18,000, and one half mile from Durham, a station on the Southern Pacific and Northern Electric Railroads. This tract belonged to two owners, 3,680 acres to Stanford University and 2,359 to Richard White. Butte Creek runs through the property and furnishes water for irrigation. One artesian well had been put down by Stanford University. It showed there was an ample underground water supply for irrigation, should it be needed.

The land is bordered on the East by foothills which give summer pasture. On the West are thousands of acres of almond, peach, and prune orchards. The cheap pasture and the demand for alfalfa hay by the orchardists made it certain that dairy herds and the growing of alfalfa hay would pay.

This tract had been part of a Spanish land grant. For twenty years it had been held by non-resident owners. In all that time, it had been cultivated by tenants and hired labor. The improvements on the White tract were few, old, and out of repair. Those on the Stanford Ranch were good; but being built for an estate of 19,000 acres, were too large and costly to be used as improvements for small farms.

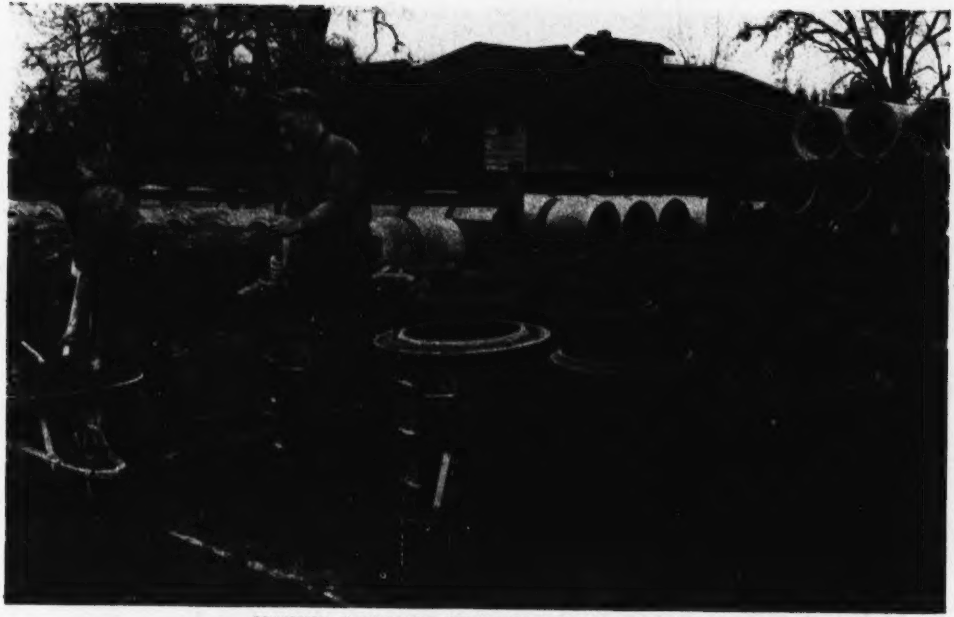
There was a rudimentary ditch system on both tracts, but it had to be entirely rebuilt to meet the needs of closer settlement and intense culture. The Stanford land could all be irrigated. It was bought for $100 an acre. About 1,500 acres of the White land could be irrigated. These were bought for $100 an acre. For the land which could not be irrigated, $10 an acre was paid.

The Stanford land was bought on time. One tenth the purchase price was paid in cash; the remainder was to be paid in equal semi-annual payments extending over twenty years. Cash was paid for the White land. The total cost of all the land was $542,610.

When the board had made the first payment to Stanford University and the full payment for the White land and had paid the expenses of the examination of the tracts offered, there was $50,000 of the original fund left with which to finance the development. This would not build the needed irrigation works. More money was required for this and for helping to improve farms. So a loan of $125,000 was obtained from the Federal Land Bank. Though the loan was made to an association of settlers, the money was turned over to the board. On the bank loan, the settlers pay 5½ per cent. interest and have 34½ years in which to repay the principal.

The land purchased had to be irrigated. The water rights were as important therefore as the deeds to the land. They were at that time as chaotic and uncertain as a land title in Russia. In the absence of any public administration of streams, California water rights have to be settled by agreement or in ordinary contests in the courts. For five years Stanford University had been struggling to have its rights to Butte Creek fixed by a law suit. Its claim had been contested and a favorable decision in a lower court had been reversed in a higher court on a technicality. After many thousands of dollars had been spent the rights were still as uncertain and as far from a determination as they had been five years before. The board could not afford to assume costly and continuing litigation. It offered therefore to buy the land only if the rights to water in Butte Creek could be settled by agreement out of court; otherwise it would buy elsewhere. The people of Butte County wanted the Settlement. They wanted to see an unpeopled land dotted with homes. Water users were anxious to end the litigation. The entrance of an outside influence tended to relieve the friction that litigation had created; and the board's efforts to secure a quick settlement had the support of the attorney for the most powerful faction of the litigants. The board offered to cut the Stanford claim from 250 to 40 cubic feet per second, if all other users would reduce their claims in like ratio. On this basis in two months the conference of water users reached a final settlement.

The settlement of the rights, however, did not ensure each irrigator his legal share of the creek's water. Each diverter had his own headgate. Each, in the past, had been in the habit of damming the stream in summer without regard to rights lower



MAKING CONCRETE PIPE FOR SETTLERS' USE

down. The diverters at the head of the stream had, therefore, a great advantage. They could, and often did, take the whole flow irrespective of what was the result to irrigators below. This situation is common to all California streams used in irrigation. The state water law does not provide for public control of streams. California is about the only enlightened irrigated State in the world that still follows the old rule that he may take who has the power and he may keep who can.

In the case of Butte Creek, the Durham diversion was below all the others. As a result no water reached the Colony ditch headgate in mid-summer in 1918 when the need for it by the Durham settlers was acute. Irrigators above had thrown a half dozen temporary dams across the streams and were taking the whole flow, in some cases wasting twice as much as they used. If Durham had been an unplanned, undirected settlement, the settlers would have lost their crops and there would have been a new series of law suits, because no single individual could have protected his rights. The Settlement, backed by the board, was able to propose and carry through a new and better plan of dividing the common water supply.

The superintendent called six of the diverters into a conference and showed them the waste of keeping up six dams and having each year renewed quarrels over their removal. He proposed that one dam be built for all; that one man divide the water when it was scarce; that the cost of this be borne in proportion to the rights to the flow. This was agreed to. The dam has been built under the direction of the board's engineers so that, in future years, money and time will be saved and ill feeling and continuous litigation will be averted.

The water right troubles of the Durham Settlement are typical. All irrigation development in California is harassed by chaotic and unworkable water laws which are the inevitable outcome of the weakness that has marked all dealings with water, the most vital state resource. Difficulties concerning the use of water can be avoided only by a rational system of public control of streams. Every stream from which there is more than one diverter, ought to be under public control. It should not be left to any individual to determine how much water he will take; for as long as the determining factor is individual generosity or greed, so long will greed rule and water needed in some localities will be wasted in others. On each stream, a State officer should in times of scarcity, regulate diversions as he does in all of the older irrigated countries of the world and in all of the Rocky Mountain States.

A little over 5,000 acres of the land at Durham could be irrigated. A system of ditches had to be planned and built to carry water to each farm. On each farm small distributing laterals about 600 feet apart had to be built. In the banks of these laterals concrete or wooden gates had to be placed to let water out of the ditches to irrigate the fields. The surface of the soil between the laterals had to be evened off to a uniform slope and small dividing ridges about 50 feet apart thrown up in order to confine the water let out of the lateral ditches and enable a crop to be evenly watered. If the water supply is small, only one strip is watered at a time. If there is plenty of water, a good irrigator can look after the watering of a dozen strips at a time.

The first step in laying out the irrigation ditches was to make a contour survey. The contour map of Durham shows all 6 inch changes in elevation. From this contour map the direction which laterals and the border ridges of fields should take could be seen and the plans for watering laid out. The farms were to be fitted to the ditches like blocks to city streets.

The slopes of the land and the location of ditches controlled the shape of the Durham farms but not their size. Variation in soil was the governing factor in fixing the price of land and the number of acres in a farm. The study and classification of soils, a relatively new feature of agricultural science, has been but little used in rural plannings. The California Land Settlement Act had, however, recognized its value and soil studies had been used in the selection of the land. The Act gave the board the privilege of calling in the dean of the Agricultural College as its expert adviser in this matter; and through him the board received the valuable help of the head of Soils Technology Division of the State University. The latter made a soil map of the Durham tract. This showed the board, and later the settlers, the land best suited to grow grain, alfalfa, fruit, and vegetables. Viewed from the state highway, all the Durham soil looked alike, but the soil auger and later the crops grown told a different story.

American agriculture has been destructive of soil fertility and the American farmer has lost a great interest in his calling from the lack of knowledge of how the thin crust of fertile soil in which plants grow has been created. If he knew the millions of years that it has required to create the vegetable matter and earth dust to make the six inches of good soil that usually covers a farm he would be more careful to preserve it. The soil reports of Professor Shaw gave the Durham settlers that information. To many it opened up an entirely new field of thought and made them watch the behavior of the first crop grown with keen interest. Professor Shaw told them that centuries ago this area was a bed of volcanic mud. Butte Creek, carrying the water, volcanic ash, and sand from its mountain watershed, emptied its flow into this mud flat at the north end. The water and silt spread out over its surface, building up a deltaic fan of sediment which had thickened, widened, and lengthened with years. The greater part of the Durham area is in this sedimentary fan, but on the southeast side it goes beyond it. The upper part of the tract is therefore a silt soil, the lower part is adobe. When, about 40 years ago, Senator Stanford bought the land, Butte Creek was shifting its channel each year and still emptied its floods over this mud flat. The whole area was usually flooded during the winter and spring rains. This made the land fit for little but grazing. Stanford confined the creek to its present channel by wide strong levees and turned much of the area into grain fields.

The soil map showed that about 1,200 acres of the land is adobe, about half is silt loam, and the remainder varies between clay and sandy loams. There are strips of sandy land showing old creek channels, there are areas where the silt deposit is six feet thick, and there are others where it thins out to six inches. The adobe land grows fine grain, but it is not good for orchards or gardens. The silt soil would grow about anything which can be grown in California. Ten tons of alfalfa were grown on some of the settlers' farms the first year.

To cultivate the grain land, a settler would need four horses, a harvester, and strong plows. To make the purchase and maintenance of this costly equipment pay, he would have to have a large farm. On the silt soil, the settler could cut five crops of alfalfa; he could grow two cultivated crops each year; he could in time have an orchard. Here a small farm would pay. On from twenty to forty acres, a good sized family could be kept busy. The soil map therefore fixed the size of farms, helped settlers select farms, and served as a guide to cultivation. It was used also in fixing the value of the land and the acreage price which would be charged. With it as a guide, the land was divided into farms which vary in size from 9 to 300 acres and in value from $48.50 an acre to $235 an acre.

So wide a variation in prices had never before been seen in an American colony, but so well were the Durham prices adjusted to settlers' ideas of values that every farm was the first choice of some person.

While surveyors contoured the surface and soil experts mapped what lay beneath the surface, the board made the Stanford land ready for settlement.

It hired and bought teams and implements and put them to work leveling and seeding some land to alfalfa and plowing and planting other land to grain. It secured a foreman who is an expert at preparing fields for irrigation. When in May, 1918, the water right agreement had been signed, the soil map completed, and the farm boundaries fixed, the board had spent nearly $30,000 preparing land and putting in crops. It was able to offer settlers ready made farms. On some of these one crop of alfalfa had been cut and three others could be cut before the season's end. On others grain crops were ripening.

Farms with growing crops looked good to experienced settlers. There was an income in sight. When they looked at the grain and alfalfa fields, they saw feed for their stock. They saw money coming in to help meet the large expenses for improvements. On the land made ready for irrigation, they could begin to farm; that is, to do the kind of work they understood and enjoyed doing. Preparing land for irrigation is the work not of a farmer but of an engineer. Leveling fields and throwing up borders require a knack and a skill gained only by long experience; the work can be done cheaply and well only by an outfit of teams and implements that the small farmer cannot afford. To get farms with all or even a part of this preparatory work done was such a great boon to settlers that the improved farms were always the first choice.

Settlers were glad to pay for this leveling and planting. If the land were seeded to grain, the full cost was paid in cash or when the crop was sold. If the land were ditched, leveled, and seeded to alfalfa, the settler paid 40 per cent. of the cost in cash and was given 20 years in which to pay the remainder.

Some of the land had been leased before the board purchased it. The leases did not expire until September so that the farms could not be allotted to settlers before November. That was too late for them to put in a grain crop, so the board put in the crop before offering the land for sale. To do this, it bought a 75 horsepower Best Tractor, a plow, strong and heavy enough to rip up the hardest soil, a power leveler, and a large part of the Stanford outfit of horses and mules; and it then hired about 100 teams from contractors. With this force, it built ditches and leveled and seeded land. Before the land was allotted in November nearly 2,000 acres had been seeded.

When the board looked into the question of what was needed to make the new farms an opportunity rather than a temptation, they came to the conclusion that the chief factor was the selection of the settlers. The board realized that success would be impossible if men who did not have a real liking for farm life and a willingness to do the necessary work were permitted to become settlers. It therefore spared no effort in finding out the plans of those seeking land and learning whether they were qualified to succeed. The results of the first year at Durham have shown clearly that the restrictions of the future should be even more severe, that the settler with small capital must be fully qualified by experience. More care will be taken in the future to find out what applicants have done and whether they have had any training in the kind of agriculture that must be followed on the land to be sold.

When the farms of the first and second units were ready for settlement, notice was given by the press and by post card to those who had applied for farms. Thirty days were given for inspection. All applications received up to the closing hour were put on an equal footing.

Each person who applied for a farm filled out a blank form which was prepared to show what had been his past experience. In it, the applicant stated his capital and told his plans for improving and cultivating the farm. If he wanted help, he gave the amount and kind of aid desired. Before the board came to deal with these applications, many who had prepared them had talked with the superintendent of the colony or the chairman of the board. When there were several applicants for the same farm, the board met them and was able, as a rule, to form a correct estimate of their judgment, experience, and industry.

In dealing with applicants, the board was always careful not to make the prospects too rosy. They told each one that the outlay would be large; that the settlers would have to work hard for the first two or three years in order to succeed; that the profits of farming were small; and that the beginner would have to face certain hardships and trials. This was done to weed out the over-sanguine and to prevent those who did not realize how much it would cost to improve a small farm, from beginning something they could not finish.

It is the board's view that no one should attempt to pay for a farm unless he has a little of both money and experience. It does not ask that he have much money, as the main object of the act is to provide land for men who, without its help, would not be able to buy farms at all. But to attempt to pay interest on the whole cost of a farm is to impose a burden heavier than the profits of agriculture on a new farm will stand and heavier than most families will carry. The board has ruled, therefore, that each settler should have from $1,500 to $2,500 of his own.

All farms in the second unit were applied for; and for many of them there were from four to nine applicants. Most of the farms were sold to men who had been tenant farmers. These men had the necessary equipment. If they did not get homes in this settlement, they would remain tenants because they lacked capital to buy elsewhere.

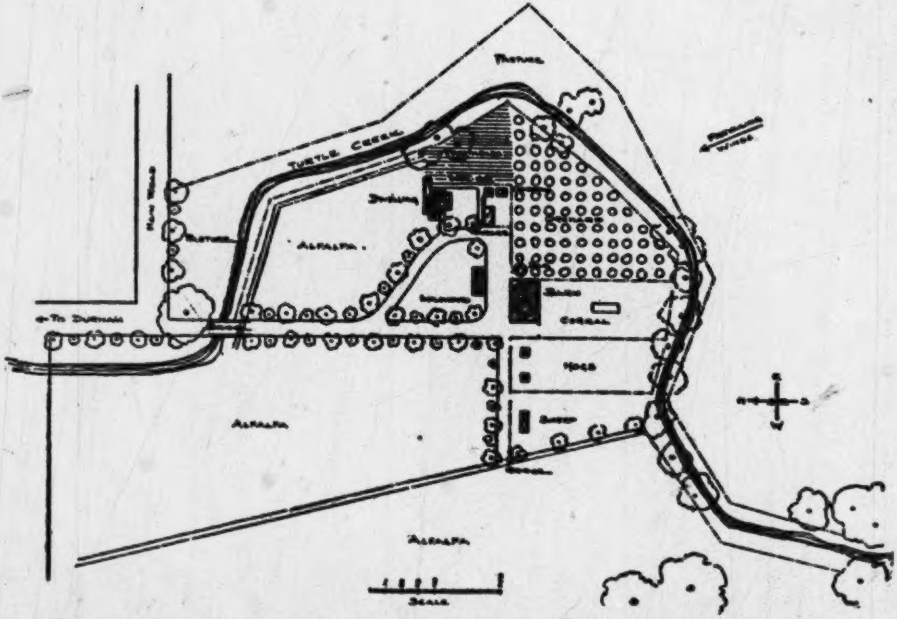
As there were more people than farms, some had to be disappointed. A few knew without explanation why they were not chosen. Others were told frankly. One of the hardest tasks was to reject young men who wanted to marry and start for themselves. The board tried to make all applicants realize that it treated them with fairness and candor. The result was an entire absence of resentment or ill feeling. The friends of the Act who expected or feared that there would be an outcry of favoritism, or that political pressure would be exerted, had a pleasant surprise.

The plan followed at Durham is far more intelligent and democratic than the plans of the United

States Government, and it has given better results. The United States Government has thus far made no scrutiny of the qualifications of applicants for public land. It followed the rule of first come, first served, regardless of merit. Later when the number of applicants became too great for this rule to be retained, lands were granted by lot irrespective of whether the applicants were capable or not.

Few realize how much money has to be spent to improve and develop an irrigated farm. To level the land and throw up the borders for irrigation at Durham has cost from $25 to $83 an acre. This is greater than the price at which many an improved farm can be purchased in the East and South. To the cost of preparing land for irrigation must be added the outlay for house, barn, fences, live-stock, and implements.

Every settler at Durham made out a list of the things he needed and their cost. It was pointed out that the board could lend only $3,000 to any settler. The rest of the money must come from the settler's funds. As the board had a prior lien on the land and on any improvements made with money it advanced, the settler would have no commercial security to offer for outside loans. He had to possess, therefore, enough capital to improve and equip his farm with the help of the board's $3,000. If he lacked the necessary capital, he would likely fail. No settler has been able to show on paper how he could improve and equip a 30 or 40 acre farm for less than $4,500. No one has been able to do it thus far for $5,000. Most of the costs run from $6,000 to $8,000. War prices have made the actual expenses


PASTURE
TURTLE CREEK
PREVAILING WINDS
MAIN ROAD
PASTURE
DWELLING
ALFALFA
ORCHARD
BARN
CORRAL
HOGS
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SCALE

PLAN FOR THE DEVELOPMENT OF A DURHAM FARM PREPARED BY THE BOARD

at Durham heavier than they were a few years ago. In the Australian States, where land is far cheaper and wages are lower, settlers are told they must have from $1,500 to $2,500; and in Denmark and Ireland experience shows that settlers need more capital than before the war.

Some of the Durham settlers were accepted with the minimum capital of $1,500; some had $10,000; the average capital of settlers was in round numbers $4,500 in money, and over $6,000 in money and other assets. In a number of cases the assets could not be utilized as they were town lots unimproved, not bringing in any income, and not readily saleable. In nearly every instance settlers have stated that without the opportunity presented at Durham it would have been absolutely impossible for them to undertake becoming farm owners. They were afraid to buy under the conditions of private colonization.

A feature of the Durham development has been the help given to settlers in planning and building their houses and other farm buildings. This work has been directed by an architect and farm engineer who helped to survey the farms, studied the area, and prepared plans for the houses of some of the intending settlers before the land was sold. He had a matured scheme of improvement, therefore, when the first house was located. After the different farms had been granted, he helped the owners to locate the different buildings and to prepare working plans for improvements. There is a working plan for each Durham farm.

Thinking out in advance the division of each of the farms into fields, the rotation of crops, the location of house and barn, and thus trying to visualize what the coming years were to create, gave to the settlers a new enthusiasm in their undertaking. Furthermore, there was to be a community center and a social hall. In talking with each other and with the Farmstead Engineer, the settlers began to conceive of their farms as part of a large coördinated and effective scheme. For the first 3 or 4 months after settlement, the Farmstead Engineer was an exceedingly busy and very useful person. He was the " Father Confessor " of the settler in farm planning and of the settler's wife in house planning. His days were spent in conferences and his nights in trying to put what had been agreed upon into definite plans and estimates. It soon became apparent that he would have to have help if the homes were to be completed before the rainless summer of California came to an end. It was war time and most of the engineers and draftsmen were in the service. An appeal had to be made to the State Engineer for architectural help from his office.

Through State Engineer McClure's sympathetic interest one of the architects from his staff was permitted to come to Durham. This architect had an unusual talent for house planning and for showing how good taste could be made to cost no more than poor taste. The illustrations of the settlers' homes given elsewhere show how much rural life gained at Durham by the tact, skill, and interest of Mr. Cook, the Board's Farmstead Engineer, and of Mr. W. E. Backus, the assistant from the State Engineer's office.

To build over 100 houses in a short time was not, however, the task of two men. Extra draftsmen had to be employed. Materials for buildings, fences, and irrigation structures were bought by the board for settlers in carload lots. For these cash was paid at wholesale prices. The farms were improved, the houses built with far less expense, effort, and time than would have been required if each settler had been left to shift for himself and deal with his problems without organization or advice.

There is nothing which adds more to the attractiveness of a farm than a comfortable house and a well planned garden and orchard; and there is no place where expert advice can be used to better advantage than in the location of these improvements. The usual plan had been for farmers to build their houses a few feet from the country road, but this practice was ignored at Durham. There were much criticism and curiosity when many of the homes were located in the centers of the farms.

The tact and experience of both architects was needed in curbing the enthusiasm of some settlers who were inclined to spend too much of their capital on the home and in preventing others from putting up shacks which would lack both comfort and convenience. One settler with $5,000 had to be reasoned with in a number of conferences before he would forego spending between $3,000 and $4,000 of his capital on the house. Left to decide these matters for themselves, it is certain that some of the settlers would have made grave mistakes by spending too much money or too little; and while they were deciding what should be done and trying to arrange for the material and help needed, pressing farm work would have had to be put aside. Many of the crops grown by settlers in 1918 would not have been planted and much of the material needed would have remained unpurchased, if the settlers had been left to themselves. The board looking forward to their needs had bought early and secured the last carload of fencing wire that was to be had in northern California. Because trained minds gave to the settlers the help of all that had been learned about rural home planning, the housing scheme at Durham presents a picture of rural comfort and beauty not often equaled in old settlements.

The health of the Durham people had early attention. Some of the irrigated areas in California had been menaced by malaria. This has been increased by the large number of alien peoples who work in country districts either as tenants or farm laborers. The progress of some sections and the vigor and well being of the people have been impaired by failure to deal promptly with malarial conditions.

The state health organization rests on the district system and it may or may not be put in operation at the will of the local authorities. In any case, local interest and support are needed because a single health officer in California often has an area larger than the combined territory of several New England States.

In order to combat malarial troubles, the State passed a law under which the county supervisors can create mosquito abatement districts. If these are created, an officer is appointed to remove the breeding places of the mosquito and other sources of infection.

Since there was no such district in Butte County, Prof. W. B. Herms of the University of California was asked to report on whether any action should be taken. His report stated that if nothing were done, the irrigation and closer settlement of this area would likely be followed by malarial troubles, but that if the breeding places of the mosquito were destroyed and the houses properly screened, this danger would be averted. Professor Herms outlined the boundaries of a mosquito abatement district needed to protect Durham and it was created by the Board of Supervisors. The salary of the district officer and the expenses of draining and oiling breeding grounds are paid by a tax on the property in the district. No objection was offered to the plan from the property owners outside of Durham who were included in the district.

Soon after settlement, a blood test was taken of every person in the colony. Only one had malaria. The breeding places of the mosquito were sought out and removed. The doors and windows of all houses have been screened and constant oversight is exercised to see that stagnant water is not permitted around the homes. The cost of these preventive measures has been small compared with the gain, and the complete freedom from this disease has had a marked influence on public opinion throughout the Sacramento Valley.

The district has received numerous inquiries about the preventive measures and their cost from people of other sections, who are now showing their approval by the creation of other districts.

Recently the settlement was visited by Dr. F. L.

Hoffman, statistician of the Prudential Life Insurance Company and one of the leading health authorities of this country. In a plan for a more effective federal and state health administration, Dr. Hoffman has the following to say about the Durham experiment:

> "In no other State therefore, it would seem, are the conditions more ideal than in California to justify the undertaking of a thoroughly reorganized State Health Administration on the basis of new principles and inclusive of new functions essential to the attainment of decidedly better results. No State is more progressive and more willing to meet the required expense to attain the highest ideas in the proper sphere and function of every branch of the state government. California has three great universities, adequate medical schools and clinical facilities, and numerous well-managed public institutions, all useful for the purpose of sustaining a thoroughly well-worked-out plan for a modernized health administration such as is here proposed.
>
> "How much has been achieved within a comparatively short period of time is best illustrated by the gratifying success of the State Land Colony at Durham, which in practically all the details of its administration rests upon the scientific advisory assistance of the University of California. This work has been carried forward to such a successful termination that it gives every promise of serving as a model to other sections of the country, even though the plan may not prove feasible of universal adoption. What has thus been achieved in the realm of agriculture should be equally possible in connection with efforts to improve health and physical well-being. It is to be hoped that the executive officers of the State Land Colony will see their way clear to initiate a practical method of health supervision, including physical examinations, medical assistance and institutional treatment in conformity to all the knowledge available on

these subjects at the present time. If this suggestion could be adopted the State Land Colony would only carry into further practical execution the method so successfully worked out in behalf of the students of the University of California, who for more than six years past have been under qualified medical supervision, which has been provided for at minimum expense, and without the pretense of social insurance, including all that must be considered essential to reasonable medical or surgical needs."

During 1919 the Coöperative Live Stock Association of the Durham Colony employed a veterinary surgeon to look after the health of the cattle, hogs, and sheep of the settlement. The results were so satisfactory that plans are being worked out to make this a permanent arrangement.

CHAPTER IX

AID TO FARM LABORERS IN THE DURHAM SETTLEMENT

A RECENT number of a leading farm journal[1] had an article by a farmer on "Hired Men I Have Known." It described "six familiar varieties," only one of them good. The other five either did not know how farm work should be done or did not have any interest in the farm and its success. The story of this farmer's trials showed the worry, irritation, and loss that are now a part of the typical farmer's lot because of the lack of trained and loyal farm workers. He complains that the typical hired man is asking higher wages than the profits of farming will stand; that he strikes for higher wages whenever there is a pinch in farm work; that he leaves without warning or cause whenever the impulse to seek greener fields or whiter lights seizes him. These things are making it more and more risky for farmers to engage in the kind of agriculture which needs dependable, intelligent help. The farmer with the large dairy herd is liable to lose cows for lack of help to milk them. The farmer growing high priced crops is likely to confront a strike when he must have help no matter what it costs. The friendly, helpful relation which once existed between the farmer and the hired man is gone. On both sides there is unrest and call for a change. It is becoming harder and harder for farmers to get men with the patience, industry, and brains needed to do farm work as it should be done; therefore many well-to-do farmers go to the city and turn their lands over to tenants.

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[1] The *Country Gentleman*, Sept. 13, 1919.

The hired man's side of the question is not so well known. He does not attend conventions or state his case in the press. But even without his testimony, certain facts stand out as ample causes for his lack of interest in rural life and his desire to get away from it. His grievances are that he sleeps in a bunk house, often ill kept and dirty; that the food is poor; that he has no amusements or recreations; that he is often ill treated; that he has no social status and no part in the community life. These are hurts to the pride and self respect that the type of laborer the farm needs will not endure. The work of the farm is not planned to give constant employment and when it stops the laborer has to migrate or starve. There is no chance for him to have a home and garden of his own and thus be able to marry and have children and bring them up to be contented self-respecting people of the future. His life and its prospects have grown steadily worse while the lot of the factory worker in the city has grown steadily better. As a result, the American farm worker is disappearing. He has moved to the city where he can have a comfortable home, where his children can be educated at the public expense, and where he is treated with respect and consideration.

A recent survey of labor conditions in California made by the State Immigration and Housing Commission showed that 60 per cent. of the seasonable laborers on ranches was migratory and 40 per cent. local; that there was only a sprinkling of the white race among the farm workers, the remainder being aliens,—Japanese, Chinese, Hindoos, Portuguese, Armenians, Italians, and Mexicans. The white people are discontented. They join the I. W. W. rather than the Federation of Labor. Their actions and frame of mind have grown out of the feeling that they are struggling against unfair conditions, that their employers have a deep seated prejudice against the whites as employees. Meanwhile the Japanese and the Hindoo farm colonies are becoming larger. Communities are becoming affected by the institutions of these aliens and are taking on their form of living and civilization.

As land prices rise, as farmers use more costly and complicated machinery, as scrub stock is replaced by pure breeds, there will be a growing need for careful, loyal, skillful farm workers. The time has come when the farm worker ought to be specially trained. He must be so trained if he is to prune, spray, and market the produce of orchards, grow high priced field crops, and save the farmer unending worry in the management of valuable live-stock. To-day the farmer who wants to deal with the hired man as a human being and to help meet his social and other needs, cannot find or hold capable men.

It was not always so. A half century ago, the white farm laborers of this country were almost always Americans. Their pride in the farm where they worked and their loyalty to its interests were taken as a matter of course. There were no strikes in harvest times, no collective bargaining; in hot weather and cold, early and late, they did the work on the farm. They were not coddled and did not expect to be, but they then had a part in the social life of the country neighborhood. The unmarried laborer went with the farmer's family to the country church or Sunday school, had a room in the farmer's house, and usually ate with the farmer's family. He had reason to have pride and self respect in his place and in his work. The present unrest and lack of interest began when the worker ceased to have a social status. The old way of living will not return. The present situation cannot continue. It will grow better or worse. The nation has here a problem to solve; a new policy must be adopted. Two remedies are proposed.

One is to import servile aliens, either people from southern Europe, or men from the Orient. "What we want," said a speaker at a meeting called to consider this problem, "is men, weak in the head and strong in the knees." About 5,000 farm workers came in from Mexico last year under an agreement by which they were to cross the border in the spring and go back in the autumn. An effort is being made to secure a law from Congress under which a million Chinese farm workers could be brought in and as alternatives attention is called to the surplus labor of Porto Rico and the Philippines. The objection to this policy is that it is not democratic. It means, the degradation of labor; the creation of country slums; the lowering instead of the raising of rural civilization.

The other remedy is to give the man who works for wages a comfortable and respected place in the country neighborhood. This is the plan that has been adopted in Western Europe and Australia. It is the plan being tried out in the California settlement at Durham.

Denmark began buying small tracts of land as homes for farm laborers. The success of that movement led to helping poor men become farm owners. The French Government ties the farm worker to the soil by giving a long time loan of $1,600 at 2 per cent. interest to buy the little patch of land on which he and his family have their home.

In the seven years from 1907 to the outbreak of the war, England had helped 17,000 farm laborers to become owners or life lessees of the land on which their homes were built. There were applications from 7,000 others. At first, it was a local movement; now it is a national purpose, a part of the legislation to provide homes for soldiers.

Any rural neighborhood needs something besides farms and farm owners. There is need of carpenters and blacksmiths. A skilled irrigator is a boon to hard worked farmers. Pedro, the best irrigator at Durham, complained that he had to leave the settlement to get time to sleep. The need for expert mechanics in these days of farm tractors and automobiles is as great in a country neighborhood as in a town. It is also a mistake to regard farming as an uneducated and unskilled calling. In no other industry does the interest, skill, and knowledge of the individual worker count for more. Failure to recognize and reward the competent farm worker as he should be is the cause of some of our most serious agricultural troubles. As long as millions of men and women are working on farms for wages and must so work in the future, it is a social and economic mistake to ignore their existence. Farm workers with brains and skill are as much needed in the country as farm owners; and it is only false sentiment that regards any kind of skillful, useful labor as humiliating or causes workers so to regard it.

There are more children in the homes of farm workers than in the homes of farm owners. If the children of workers grow up feeling that their parents are useful and respected, if they live in comfortable homes, they will grow up loving the country for what it has done for them, and as voters, will be a source of strength to the nation. If the self-respecting intelligent American farm workers are driven from the country and replaced by people who have no social pride and no interest in public questions, then the rural voter of the future will be a national danger.

Every reason that has led the progressive nations of the world to enable farmers to own land makes it worth while to enable the rural worker to own his home. The plan followed in California — that of selling workers' allotments on the same terms as those on which farms were sold and lending workers money enough to make good improvements — showed that the State looked on farm laborers as a worthy and solvent part of its rural life. Far from being a humiliation, the plan showed a respect and regard which the farm worker appreciated.

The fact that during the first two years of the

Danish law, the farm workers were afraid of it, believing that it was a movement to tie them to the soil and constrain them to take whatever wages farmers would offer, led some to fear that there might be a like distrust in California. Those who applied for farms feared that there would not be enough Americans willing to buy allotments and that they would in time be given to aliens who would not fit into the social life of the community. There was some reason for this apprehension.

About four out of five farm workers in the neighborhood of Durham were either migratory single men or aliens. Japanese, Hindoos, and Mexicans make up the main body of the labor on the rice farms which lie south of Durham. The board wanted to sell homes to people who were not only good workers but also good citizens, people who would want good roads, good schools, and good government. It wanted to stop the drift of white people away from the land and to bring back to country districts the hopeful independent spirit that marked the early life of this State.

Under the California Act, farm workers can have allotments in which the land has a value of $400. The board can build a house to cost $800 or lend the settler this sum to help pay for the improvements he makes. The land is sold and the loan made to the farm worker on the same conditions as land is sold and loans made to farmers. The limit on the area of the land was made small, because if the farm worker were given too much land he would either fail to cultivate it or cease to work for wages. The one and three-quarters to two acre allotment at

Durham enables the worker to have a garden, and keep a cow, some pigs, and some chickens. He need spend little money, therefore, for food; and the amount of his payments on the land and on the borrowed money is far less than the rental he would have to pay for a house in the nearest town. As will be seen later, the surplus sold from some settlers' gardens has been an important part of their income.

There are twenty-six farm workers' allotments at Durham. The number was made small because it was not known how great the demand would be for farm labor and it was felt that all those who obtained allotments should be able to find constant employment in the settlement or on the nearby farms. Farmers with dairy herds would need milkers the year through; those who had pure bred live-stock or market gardens would need help twelve months in the year, as there is no dead season in California on the farm that is intensely cultivated. In this first trial of providing homes for farm workers, it was believed that the number should be below rather than above the demand. Experience has shown that fifty allotments could have been safely placed in this settlement; in the next colony the relative number of farm workers' allotments will be increased.

The allotments vary in area from one and three-fourths to two acres. The houses vary in cost from $400 to $1800. The first year has been given up to improvements. On a majority of the blocks there has been no income from the land and it will be two or three years before the incomes from the small areas can be determined. This much can be stated: not a single farm laborer is in arrears. All of them have made their payments to the State; all who now have homes in the settlement are not only contented but enthusiastic. The change in the conditions and outlook on life of some of them can be best shown by one or two examples.

One of the applicants was married, about forty years old, and had no children. He and his wife had been farm workers, but they had saved no money. It took their whole accumulated capital to make the $20 first payment on the land. That payment was made in June, 1918. In October, 1918, the buyer explained that he did not build a house or make any improvements because he was working for one of the settlers who boarded him and paid him $2.50 a day. His wife was working in the orchards and packing plants, and being an expert packer, she received $4.00 a day and her board. The man stated that the combined wages of $6.50 was all being deposited in the bank, as the board could verify if it chose. He said they wished to continue working and saving to the end of the season when they would build a house. Before they had owned that block a year, they had built the house, a neat four roomed structure. It has been paid for and the board has not advanced one cent. They have made their payments on the land and built their house entirely out of their savings. For forty years they had saved nothing. In twelve months they had saved over $1,000. They have a belief in themselves and aspirations that they have never before dared to entertain.

Another of these farm workers sold a mortgaged farm of 177 acres because here was a chance to earn

FARM LABORER'S HOME

PURE-BRED HOLSTEINS ON DURHAM FARM

a living in the country and have a home of his own without the anxiety and burden of debt. The money from his equity in the farm built his house. He kept his team, a cow, two pigs, and some chickens; and he built a house costing $1,200. He planted a garden and then went to work with his team for $6.50 a day. His gross income from this life has been more than from his 177 acre farm and he has saved more than $1,000. He is more contented and he sees here a more useful future than he saw in all his previous life.

There were 132 applications for the 21 allotments first offered to settlers. It was harder to decide whom to accept than it was to choose between those who applied for farms. All of the farmers knew what they wanted to do. The board could look over their plans for cultivating the farm and gain a fairly accurate indication of their experience, judgment, and common sense. But there was no way of telling whether the applicant for a farm worker's allotment was the kind of man the farmers would want to hire or what use he would make of this chance for a home.

It is not surprising, therefore, that some of the allotments went to misfits, although on the whole the results were surprisingly good. A physician was given an allotment, but he changed his mind and went elsewhere. The chance to have a garden looked less attractive to a shoemaker after he was given it. And the few blocks that were alloted to city people, who thought a country home would be attractive, have nearly all been surrendered. It has worked out, therefore, that the homes are getting into the hands of the people for whom they were designed; and these people are finding their new life and opportunities more than they expected.

When the act was before the legislature there was objection to the term " farm laborer." It has been previously explained that some thought this designation to be humiliating. A writer in the press said that California had never recognized the existence of anything but a farm owner; and this was true, for the importation of alien laborers had driven out the American farm worker. Those who favored this term believed that the man who worked on farms for wages had an honorable and useful place in rural life and that the thing was not to ignore him and his needs but to create an opportunity and a position which would enable him to be independent and self-respecting. If this were done, no one would object to the designation and no one does object to it at Durham or in the other colony now being created. The farm workers at Durham have had constant work. They have earned good wages and living expenses have been surprisingly small because most of what they ate came from their own gardens.

When making the semi-annual payment on a home in Jan. 1920, the wife of a farm laborer said that the average expense for groceries for the past six months had been $6 a month. She and her husband had had chickens, ducks, geese, milk, butter, vegetables, and fruit from their own allotment. They had found it necessary to buy little but sugar and flour.

The Durham farm laborers are living in better homes than most of them ever expected to have;

their wives and children feel as if they are part of a new world. They attend the settlement meetings and discuss plans for new improvements. Their children have as much satisfaction in their garden as the children who live on 40 acre farms have in theirs. The net income of some of these laborers is larger than the net income of the majority of farmers. Those who want to be farm owners see that their present position is the stepping stone to the attainment of their desire not far in the future.

Men from about every state in the Union have applied for farm laborers' homes in the second California settlement. The plan is now understood. There will be no lack of men who know how to do farm work when the next allotments are ready. In the amended act, the value of the land which may be sold as an allotment, has been raised from $400 to $1,000. The farm workers' homes show the greatest social gain under the act. The farm workers have paid and will pay for all the State does for them.

CHAPTER X

SOCIAL PROGRESS THROUGH COÖPERATION AT DURHAM

In planning the settlement at Durham, the board realized that its main problem was not merely to get people on the land but to make them stay there. During the past fifty years there has been going on a migration away from farms, unique in the history of the world. The man born on the farm has developed a dislike for it, has left it for the city, and has rarely returned. The reason for this is not obscure. Men who live in the cities feel that they are parts of an organized society in direct contact with the vital things of life; the thoughts of the world have centered on cities. Men who live in the country feel the lack of organized rural society and the lack of educational advantages. They feel that they are cut off from progress and in the grasp of forces beyond their control; that they are being pushed back into the position of manual laborers on the land.

As cities have grown, they have wrested from the country many of its arts and industries. The farmer's markets and the prices of his products have gone into the control of cities. His stock, his milk, and his grain are being bought by city men; by city men his meat, his butter, and his bread are being prepared for him. This has taken from rural life so much of its intellectual interest and economic power that the man of active mind finds the country a place of no opportunity. The result is indicated by the depleted farms of New England and the neglected or abandoned farms in other older sections of this country.

In order to meet these adverse forces, it was necessary to provide at Durham that the business mind of the farm be organized to meet the business mind of the city. A new social fabric had to be created. Recreation and social enjoyment had to have a place. Coöperation had to be organized in order to restore the former life of the countryside, to bring back some of its industries, and to regain for the farmer control of the sale of farm products,— results which can be achieved only by bringing the people of communities to think and work together.

The growth of the coöperative spirit in the Durham Colony has been one cause of its success. So marked is this that even the casual visitor perceives something in the life unlike what he meets elsewhere. In one brief and busy year people who came together at Durham from the ends of the earth have learned to help one another with all the spirit of the pioneers of half a century ago. All the settlers take a healthy pride in what they are trying to do. Their loyalty to the community has carried to success coöperative ventures which would under ordinary conditions have failed.

While the land at Durham was being made ready for settlement, letters were written to the professors of animal husbandry in the leading agricultural colleges of the country asking them whether they approved of having only one breed of dairy cattle, beef cattle, hogs, and sheep on the settlement and if they approved, what breeds they would select. All thought well of the idea. A constitution and by-laws was therefore drawn up copied after those used by the coöperative associations of Denmark. It provided that there should be an executive committee of five members; that nothing but pure bred sires should be used in the settlement; that these might be owned by the association or by individuals; and that all sires must be approved by the executive committee of five. The board made it compulsory for every settler to become a member of this association. After it was formed, the association considered the letters from the different colleges and adopted Holsteins as the dairy breed, Short Horns as the beef breed of cattle, Duroc Jersey as the breed of hogs, and Romney Marsh and Rambouillet as the two breeds of sheep.

The constitution provided that the Land Settlement Board should appoint two of the first five members of the executive committee and the settlers the remaining three. The board named Prof. Gordon H. True, professor of animal husbandry in the University of California, and Mr. Kreutzer, the superintendent of the settlement. The settlers named three members who were all experienced stock men. The value of the association was shown at once.

Since the Durham State Land Settlement is not located in a dairying section of California but is surrounded by hundreds of acres of orchards and gardens, the Durham farmers had to obtain their cattle from sources at a considerable distance. No one farmer could afford to take long trips to remote sections of the State to purchase the few cows that he needed. If the Stock Breeders' Association were to obtain cattle in any numbers, it would be necessary for a committee to visit the communities in which the dairy business was well established and which were noted also for having Holstein cattle of good breeding and high production.

Another thing that required community action in building up dairy herds was the prevalence of tuberculosis among cattle in California. All the leading stock growers of California agree that tuberculosis is a serious menace to the life and health of people who use milk and to the dairy and hog industries. The disease is so contagious and is found in so many herds that to build up and keep a herd free from it calls for such courage, persistence, and care that most breeders have simply let things take their course. About the only way to stamp out tuberculosis and keep it stamped out is through community action. The chance for contagion is greatly lessened, if all the people in a neighborhood keep nothing but healthy animals and if the breeding of stock is done within the healthy area so as to avoid bringing in affected animals from the outside. So common is this disease that all milk for human consumption which does not come from certified dairies has to be pasteurized; and many hogs slaughtered in California are found to be tubercular from being fed on milk from tubercular cows. If the Durham Settlement were to start right, it would be necessary for its stock to be purchased by men able to judge animals and test them for disease.

The committee's first purchase was a herd of twenty-seven Holstein cows and heifers from a tuberculin tested herd. Each animal was re-tested before purchase to make sure that it was clean and suitable for the farmers at Durham. This herd was taken to Durham and was soon disposed of to the various farmers requiring stock. It is remarkable that not a single animal of this herd or of its progeny has yet reacted. In a short time other farmers were requiring dairy cows in numbers at least large enough to supply the family needs. In cases where they were wanted immediately the committee was not always in a position to supply them; for the committee grouped purchases and bought in a herd of stock at a time so as to reduce the expense of purchasing, shipping, and driving and thus to put the stock on the colony at a minimum cost.

While all farmers were cautioned not to purchase stock without having it tested, some of them were tempted, because of the urgent need of cows, to buy individual untested animals from small dairies located within a few miles of the settlement. In all, some 42 animals were purchased in this way and when finally tested for tuberculosis by the representative of the University and the State Veterinarian's office, 35 of this number re-acted. The tubercular animals were found on a number of the farms. The committee proposed to have these brought together and disposed of as tubercular animals. From one farm, five animals were thus found to be re-actors and consequently meant a serious loss to a beginner in the dairy business.

At a meeting held by the association it was finally agreed that the tubercular cattle should be disposed of as such and that the community as a whole would stand one-half of the loss incurred. This share of the burden on the community as a whole was generously met without a dissent. Such a spirit of coöperation is almost unparalleled in new communities. That the settlers were willing to rise to the occasion allowed the Durham Colony to stand as a stock breeding community without a spot on it.

It also taught these farmers that the only safe way to buy healthy cows is to have them tested by a qualified veterinarian before purchase.

The committee which represented the colony in buying cows were asked not only to obtain those free from disease, but wherever possible to get cows from herds of high milk production with a definite pedigree value, even if they were not open to registry as pure bred stock. Professional dairymen of California have so improved their herds that the average butter fat of the milk of California Holsteins is considerably above that of the country as a whole. In Durham, the settlers planned to build up herds of their own by keeping the calves of high producers; and this meant that they must have good sires. They consulted Professor True, head of the animal husbandry department of the State University, as to where they ought to go for the bulls which were to head the herds.

There was no question as to the value of the animals in the herd of A. W. Morris & Son of Woodland, California. It is one of the greatest herds of the world, some of its cows standing foremost in their class. One of them, Tillie Alcartra has broken the world's milk yield record three times in succession and is known everywhere among Holstein breeders.

Although the purse of the Durham breeders was light, they were urged by Professor True to get a sire related to this great cow; and they were fortunate in having the sympathetic interest of the owner of the herd in their ambitious endeavor. He sold to the settlers' association, King Morco Alcartra VIII, grandson of Tillie Alcartra, as a herd sire for Durham at less than one-half of his sale price.

As this was the first purchase of a community sire, funds had to be raised to meet the cost of the animal. Five dollar debentures were issued bearing interest at six per cent. and redeemable in twelve months. At a single stock breeders' meeting the sum of money required was oversubscribed and the animal paid for.

The Jane Garden herd at Sacramento owned by Fred Kiesel of Sacramento, is also a noted Holstein herd. Mr. Kiesel realized the difficulties faced by the settlers in obtaining animals of high merit and in his usual generous way of doing things, offered the community the pick of young bulls from the Jane Garden Farm. In this way Durham obtained as its second sire, Jane Garden Perfecto Walker, in Mr. Kiesel's opinion one of the best animals that ever left his herd. The third sire was a son of one of the high production cows at the University farm. The Stock Breeders' Association now owns seven registered bulls. They are kept on one farm at present, but will be divided when breeding centers have been arranged. The stock are brought for service at a charge sufficient to replace the animals later and to pay for their keep.

The committee traveled hundreds of miles looking at herds from which after inspection they did not feel it was safe to buy. Its members lost much time that could not well be spared from their farms. Out of 35 animals picked by the committee from one herd consisting of springing heifers and cows, nineteen re-acted; thus the committee lost three days' time and caused disappointment to settlers who stood in urgent need of family cows. On the same trip twelve out of seventeen in another group and twelve out of fourteen in a third group were found to re-act.

In gratifying contrast to these delays was the sale at the Napa State Hospital, which has kept pure bred sires for fifteen years and has tested the hospital herd for tuberculosis for the past ten years. It put up a consignment of young heifers and cows at public auction. Here the Durham committee obtained a number of fine cattle.

It was known that the Napa herd was free from tuberculosis, that the sires had been selected with care, and that milking strains were high. The prices for the animals were far higher than the usual prices, fully double those of ordinary grade Holstein stock. The Durham Committee, fearful lest if they bought at the prices which had to be paid, their action would not be approved by the settlers, purchased only the number that could be absorbed by the members of the committee. But when the animals were exhibited for the farmers' inspection at the colony, there was the keenest rivalry for obtaining them. Three times the available number could have been sold.

Buying a cow free from tuberculosis does not necessarily mean that the problem is solved. The purchaser must know the origin of the animal and whether or not she comes from a herd comparatively free from the disease. Such information can be obtained only by testing whole herds regardless of the purchases made. It is frequently the case that an animal found free from tuberculosis when tested will re-act at a later date, if it comes from a badly infected herd.

The problems of buying cattle are so difficult that a community can solve them only by means of a committee. If each individual in the colony at Durham had been left to protect the health of his herd and that of his family who used milk, he would have been helpless.

To keep the settlement free from tuberculosis cost money that the settlers individually could not afford to spend. It took time, patience, and persistence which few of them would have shown if they had acted alone. Their stand is of value to all California and it will succeed because of the courage gained from touching elbows, in a community working together. A number of the members think a veterinarian should be obtained and financed by the payment of a definite price per animal per year by each member possessing stock. But in this, as in many other new things, all of the members are not of one mind. Some believe that it is too early to incur this expense and that there are not enough animals to keep a veterinarian occupied. The matter has therefore been laid on the table to be considered later.

A counter proposal has been made according to which the men who desire to pay a definite rate per year may do so and those who do not desire to enter into such an arrangement may pay for service when they require it. This plan would ultimately result in the payment of a definite fee each year by each of the members, if the veterinarian performed a real service to the community. There is not the slightest doubt in the minds of the executive committee, that this will be the ultimate solution of the problem of veterinary service, when there is more valuable live-stock at Durham.

In purchasing hogs for the Durham Colony, the settlers followed the same plan as that followed in purchasing cattle. The association bought one of the prize winning boars at the state fair. Mr. R. K. Walker, one of the leading Duroc Jersey breeders of Southern California, gave the colony another.

A number of the farms have pedigreed hogs which have been secured from some of the best breeders in the State. Already a market has been established for all the pedigreed stock of both cows and hogs that the settlers have to sell. Some of the members of the executive committee are becoming widely known. The purpose of the colony to have nothing but sound healthy animals and to build up a community reputation for the quality of the particular breeds that are being grown has created a confidence in the minds of the public that augurs well for the settlement's future. The farm bureaus of counties in other parts of the state are referring their members to the Durham Settlement as a place where good stock can be bought at prices which farmers can afford to pay.

All of the settlers are agreed as to the value of the coöperative association and have a keen local pride in the reputation that the stock has already secured. They realize that if they had bought as individuals, they would have bought mainly culls. By having two or three experts buy their stock they have obtained good animals at prices less than those which independent individuals would have paid for poor ones.

The Stock Breeders' Association took up also the difficult question of finding a market for the milk of the many small herds of the colony. Marketing farm products is difficult in California, a State of great distances with only a few large cities. It is shut off from the rest of the world by an ocean on one side and a desert on the other. It is therefore easy for city buyers to combine and raise or depress prices. After the fruit industry was nearly ruined by such a combination, there grew up a number of powerful organizations of fruit producers, but the general farmer has not made much headway. His position is very like that stated by Dr. Carver:

> "One thing which threatens the prosperity and even the existence of the small farmer is the handicap under which he finds himself in buying and selling. The big farmer who can buy and sell in large quantities and also employ expert talent in buying and selling and in securing credit has an advantage over the small farmer who must buy and sell in small quantities and give his time and attention mainly to the growing of crops rather than to selling them. Much of

the supposed economy of large-scale production, even in merchandising and manufacturing, is found, upon examination, to consist wholly in an advantage in bargaining; that is, in buying and selling. When it comes to the work of growing farm crops, as distinct from selling them and buying raw materials, the one-family farm is the most efficient unit that has yet been found. But the big farmer can beat the individual small farmer in buying and selling. It would seem desirable, from the standpoint of national efficiency, to preserve the small farm as the productive unit, but to organize a number of small farms into larger units for buying and selling. Thus we should have the most efficient units both in producing and in buying and selling."

The Durham farmer was in no position to market the milk from his small dairy herd or the products from his fields to advantage. He was building fences, planting crops, irrigating land; his time and his strength were both used to the utmost in getting the farm into shape. Yet from every farm there were a few tons of hay, a few hundred bushels of grain, the surplus products of the garden, and the milk from three to a dozen cows to be sold. Finding a buyer who would give fair prices for these small quantities was one of the things that could not be neglected. On it, depended whether things would be grown at a profit or at a loss.

The superintendent was charged with endless requests to find buyers and to do this he had to pool sales. Since the board believed that the colony should be trained as soon as possible to attend in every way to its own affairs, the Coöperative Stock Breeders' Association became a marketing association. The most acute problem it had to deal with was how to market the milk from the different herds to the best advantage. The farmer with three or four cows could not afford a cooling plant or a separator. Aside from the cost of the equipment to chill and separate the milk, to keep the apparatus clean would take time that the farmer could not spare. It was clear that a central plant where all the milk could be chilled and the separator run by electricity was a colony need.

The settlers would have been relieved if the board had come forward and built and operated a central milk station, but to do so was against the board's policy. So the community, with the advice of the superintendent authorized the association to raise the money, buy the equipment, and hire a competent foreman. Every settler brings the milk from his farm once a day to be tested and separated. The butter fat or sweet cream is sold as an association product and the farmer takes back the skimmed milk for his pigs and calves. The foreman keeps the books and makes fortnightly payments to members. Large dealers were eager to contract for the supply; and the association could bargain with Sacramento and Chico. It gathered data as to the profits and the risks of retailing milk to the people of Chico. The fact that its cows were free from tuberculosis and were to be kept so, gave it a marked advantage; but the settlers decided that there was a risk in retail distribution which they could not afford and that it would require money and time that were more needed on their farms. What the association's committee learned about marketing milk in cities will help them in dealing with this question in the future. As it is, the colony gets a premium on its milk, which is sold at a less expense and for a higher price than that of many of the old and larger dairies in the country.[1]

The Durham farmers are selling other things than milk under a community label. Orders are already coming to the colony for pure bred stock; and when they come, the executive committee of the association passes judgment on the quality of the animals shipped. They are also buying as a community. All the seed grain and the alfalfa seed were bought as a colony purchase. A late purchase was five silos for five farms. Mowers and plows are bought in carload lots. In all cases local dealers are given first call except when the saving to be gained abroad is too great to be overlooked.

There is, however, no rule about buying and selling as a community. The advantages of the community buying of cows and marketing milk are so obvious that they will continue; but in many things the farmers act individually on their own judgment. One farmer has already built up a local demand for his alfalfa because he cuts and cures it so carefully that in one season his skill and the extra value of his product have become known. Others are preparing to grow things a little better than the colony average and thus obtain special prices and at the same time strengthen the community reputation. Next year an auction sale of pure bred stock will be held. All are working to make it a success. Some breeders will make such a showing that here, as outside, the ablest will forge ahead.

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[1] Settlers are getting 7 cents a lb. more for butter fat than are individual dairymen nearby.

An important community action which has enabled the people at Durham to live well and cheaply was the building at Chico of a cold storage warehouse for the use of the families of the district. Its interior is cut up into compartments which are rented to users by the month or year, like the boxes in a safe deposit vault. The plant has 1,000 customers and serves a radius of 35 miles. A great many residents of nearby towns as well as Durham farmers take advantage of this system of storage.

One of the rooms of this plant is fitted with 470 paraffin fir boxes 1'x9'x3' capable of holding 100 pounds. Each box has a lock and the farmer keeps the key. The present charge is $4.50 a year. A box holding 800 pounds rents for $24.00 per year.

Meat can be brought in warm and placed in the cooling room before it is cut up. This is necessary because meat makes a fog during the cooling process which causes mold unless it is reduced by a suitable ventilation system.

In the same building there is another system of storage primarily for transient stores. A price of 1½ cent per pound per gross weight for six months is charged; but there is also a ½ cent rate where produce is stored for a short time and not frozen. Large quantities of fruits, meats, and vegetables are stored; a hind quarter of beef can be cut to sizes preferred by the family, wrapped in paraffin paper and taken from the box as needed in the best condition, the paper wrapping preserving the beef from mold and drying out. Meat stored by this means, costs users from 14 cents to 16 cents per

COMMUNITY COLD-STORAGE PLANT, CHICO, SHOWING ARRANGEMENT OF BOXES TO HOLD ONE HUNDRED POUNDS pound instead of from 35 cents to 45 cents per pound as bought in small quantities from butchers.

The storage plant has been used by the settlers for keeping eggs and dressed chickens until enough for a shipment has accumulated or until a price that is satisfactory is offered.

One of the large rooms is given over entirely to the safe deposit system. Tiers of drawers are arranged on both sides of the room and in the center. Each of the 470 draws and 80 large compartments can be opened and emptied without disturbing any of the others. Entrance to this room is from the street and through the cooling room, which is fitted up with cutting blocks and a complete set of butcher's tools for the use of patrons. Paraffin paper is furnished the patrons at cost.

During the summer months, farmers bring in loads of green corn, beans, peas, and other vegetables, which may be kept fresh for several months. Grapes packed in redwood sawdust keep perfectly for a long time.

A modern plant like that at Chico including equipment for ice making, capacity 10 tons a day, may be built for from $45,000 to $50,000. The rooms ought to be tiled and the boxes made of galvanized iron for easy cleaning and non-absorption of odors. This would be an improvement over the Chico plant, in which the rooms and the individual boxes are of wood.

The Stock Breeders' Association enlarged its functions in the interest of the community in dealing with education. The children in the settlement had to be educated. The nearby town of Durham said, "Send the young children to the town school." Chico, seven miles away and connected by a concrete highway, said, "Send the larger children to the high school or to the State Normal." The Stock Breeders' Association discussed the question, "Shall we try to build a school this year or start a free bus to send the chilren to the two towns?" and decided in favor of the bus line. Thus at present all the children go to schools outside the settlement; the town of Durham had to spend $50,000 to provide for the first year's increase in its school attendance.

The settlement hopes for a training school in agriculture to be located at its civic center and affiliated with the State Normal School at Chico. The site reserved is so beautiful that it will be an excellent influence in the lives of the future generations. This site was part of an oak grove reserved by Senator Stanford, former owner of the land, as a park. When the State bought the land, the board at first reserved eight acres of this for a school site. Prof. Frank Adams of the university on one of his visits to the settlement made a protest at the small size of the area. He said, "The board must reserve twenty acres instead of eight. That grove ought to be kept for a country picnic ground. You can do it now. If you sell it, there will be no chance when its value is realized. Think what it will mean to have that shade in the years to come when all the other groves are gone." The board approved. Twenty-two acres were reserved. The picture illustrates the appearance of the land now. The frontispiece shows what it will be when fully improved.

Already the grove has become a neighborhood institution. The settlers have erected a dancing pavilion where they gather every other Friday night. They have bought a piano. The dances are attended by some of the best people of the surrounding farms and orchards, whose lives had for years lacked social entertainment. One of the outside farmers said, "Until the settlers put up that pavilion, I hadn't danced for fifteen years. Now I'd no more think of staying away than of going without a meal. It livens up the whole family."

The Durham community do not need to go to the city to keep from being bored. They do not find farm life drab or dull. Although they have to work hard and count the cost of all they buy, they feel no lack of those homely joys which cost only a friendly helpful spirit and a little time and effort to plan and prepare. What strikes the stranger is the vigor of their social interests and the effect it has had on the morale of the struggling families.

Thus far, whatever has been done for the social welfare of Durham has been done as a part of the practical task of making a living. This was something which could not be postponed. The settlers had no surplus capital. After the first six months, bills had to be paid from things sold off the farms. The pressing need for getting the farms in shape to make money, made any elaborate social program unwise, but it did not prevent unique social progress. It led the settlers to see that their own money and all that the State could lend them would pay for what they needed only if constant frugality were the rule. It led them to understand that if they were to get full value, they had to buy and sell as a community.

Coming to farms on which crops were growing, receiving aid in planning and building houses, finding a constitution and by-laws for the Coöperative Stock Breeders' Association all ready for use, made the Durham settlers realize at the start that every farm and family was a part of an organized whole. Their training in agricultural science began when the letters from fifteen agricultural colleges were handed them. It has been kept up by close contact with the University. As the letters were read, settlers gained a new idea of their share in the undertaking and of what could be done on their farms. The leading experts of the nation were advising them. Professor True supplemented their advice with talks on what a community could accomplish if all its members would work together to build up a reputation for products of good sound quality.

In one month the settlers learned more about stock breeding, blood lines, and the care of animals than they had learned in ten years before. When they debated the merits of different breeds, they began to think as never before about form, color, size, and blood lines, as factors in growing live-stock. The money value of pedigrees was a new idea with most of them, but the royal breeding of the community bulls soon added something to the value of every farm and set a standard to be lived up to in other farm matters.

As the months went on and the Durham settlers worked together in buying stock, in planning their community center, in deciding how the settlement children should obtain school privileges they began to be bound together by ties of personal affection as well as community interest. The action of the stock breeders in making the community share in the loss from the enforced sale of tubercular cows has been mentioned.

Recently a settler's barn burnt. He lost his hay, horses, and most of his farm implements, a money loss of about $3,000. I wrote asking if there was anything the board could do to help him get started again, but before my letter was answered the people of the settlement had met, made all arrangements, and rebuilt the barn for him. After this remarkable example of community spirit, the settler wrote me this letter:

> "Your letter of Nov. 28th at hand. I wish to thank you for the kind offer, but at the present time I am not in need. Everything is going along nicely. I will admit the loss is a hard blow to me at the present time, but I can see no reason why I should not be able to go ahead just the same and put my farm on a paying basis. I have a new barn. The old one and other things that burned, I have forgotten, but I will never forget the kindness of the people on the colony. They all turned out and put my barn up in two days. I greatly appreciate such neighbors."

Coöperation is to be one of the vital forces in rural progress in the future. Its material advantages are no greater than its social benefits.

"Our village life" says Mr. G. W. Russell, the Irish poet and land reformer, "is dull because it is the life of isolated individuals. Our rural populations are no more closely connected for the most part than the shifting sands of the sea shore. There are personal friendships, of course, but few economic or social partnerships. Everyone pursues his own occupation without regard to the occupation of his neighbors. If a man emigrates it does not affect the occupation of those who farm land all about him. They go on plowing and digging, buying and selling, just as before. They suffer no personal economic loss by the departure of half a dozen men from the district. A true community would, of course, be affected by the loss of its members. A coöperative society that loses a dozen members, the milk of their cows, their orders for fertilizers, seeds and feeding stuffs, receives serious injury to its prosperity. That is the difference between a community and an unorganized population."

CHAPTER XI

THE CAPITAL REQUIRED BY SETTLERS

In settling the land at Durham, the board was criticized because it would not sell farms to people without either money or assets. It was argued that men without capital had been able to buy farms from the time the Pilgrim Fathers landed at Plymouth until the beginning of this century. Many believed that the aid given by the state should be sufficient to furnish all the money needed to build the settler's house, buy his team and implements, and provide for his living expenses until he could grow a crop. But the fallacy of this belief was understood by every one who had accurate knowledge of the cost of improving a farm and of the hazards of farming.

Nothing connected with colonization has been less obscured than the amount of money needed to improve and equip a farm. Official information on this point has not been available; yet such information is most necessary to any person who buys unimproved land. An unimproved farm cannot produce an income until money is spent to provide live-stock, implements, shelter for the family, and living expenses.

The amount of money required for these things should be known by those who deal with settlers; and settlers ought to be candidly and fairly informed of it and advised about the risks they incur. If the land seeker does not have the amount of money needed, then those who are selling the land should either undertake to furnish it as a loan or advise the intending buyer not to risk his meager capital in what is likely to be a losing venture.

Few farm buyers get the needed information and advice from private land salesmen. Such salesmen make their living out of commissions which usually come out of first payments. If the prospective buyers have money enough to make first payments, the most seductive representations are made to induce them to take the risk. Even when settlers are able to borrow money for development as at Durham, the first year or two may be a time of anxiety with certain risks which nothing can avert. There is the chance that the first crop will be a failure, that illness may come to the family, or that crop prices will be low and the settler's toil fail to bring the expected returns. It is a universal experience that many things have to be bought that were not foreseen. There is a tendency to spend money while it lasts unless there is a definite budget to restrict spending.

The tendency of the actual cost to run ahead of the estimated cost is great in irrigated areas where the surface has to be checked and leveled so that water will flow over it evenly. The expense of the preliminary work which must be done on high priced land nearly always runs higher than was anticipated.

Those who urged that settlers without capital be given a chance did not realize the revolutionary change which has taken place in financing farm buying in this country in recent years. When a pioneer obtained free public land as a homesteader or bought it at a nominal price as a part of a state or railroad land grant, there was little or no interest to be paid, and the entire money expenses of many a homesteader were far less than the yearly taxes which the owner of a small farm at Durham has had to pay this year. No capital was needed for these transactions and the settler's labor would earn all the money required. But when land costs $200 an acre and $50 an acre has to be spent to prepare it for irrigation, a 40 acre farm means an investment of $10,000. Interest and taxes on this sum will alone require $50 a month; and to this must be added the high cost of living before a crop is grown. To improve a farm and make it ready for crops will require a far larger outlay than any inexperienced person can realize.

The cost of buildings, horses, cows, and implements runs into a staggering total, a total which has trebled in the last twenty years. Capital and credit are the keys needed to unlock the door to farm ownership. Where these are not required or provided, the cry of "Back to the Land" is a delusion or a fraud.

Countries which have made state aid in land settlement a government policy find that the amount of credit to be given the settler and the amount of money that the settler must furnish, are two things that need to be definitely and clearly understood both by the State and by the settler. For on these two things depend the solvency of the scheme and the success of the settler. In the closer settlement of irrigated land in the State of Victoria, Australia, it was found that an average of $3,750 was needed to put a forty acre farm in shape for a family to live on it and earn a living income from its cultivation. The State asked only a three per cent. cash payment on the land and made a loan of what was the equivalent of ninety-seven per cent. of the land's cost. It required that the settler provide a third of the money needed to improve and equip the farm. Any settler seeking a farm of 20 acres or over was required to have $1,250 in money or approved equipment, so that the State's loan of not more than $2,500 would bring the total to $3,750. After a year's experience the minimum of $1,250 was found to be too low and the settler was required to have a capital of $1,500. Under this credit limit, settlement has gone on for 10 years. In some cases the latter minimum is not enough. Where there is a crop failure or illness in the family, settlers have to ask for additional help. This is given in worthy cases by deferring the payments due on the land. With the consent of the board such payments may be deferred for a period of two years, the interest on them being added to the debt.

The pressing question which the California Board had to decide was how much capital the settler should have to supplement that which the board could provide. In deciding this, it had the help of the expert in farm management of the State University, who gave the board the following estimate of the cost of preparing and equipping for settlement and cultivation acreage for grain, fruit, poultry, dairying, and mixed farming:

THE COST OF BUYING AND EQUIPPING A FARM

By Prof. R. L. Adams

Table I

These estimates of cost are made for five representative California farms as follows:

	Acreage	Value per Acre	Total Value
Grain	320	$ 60	$19,200
Fruit	20	120	2,400
Poultry	10	200	2,000
Dairy	30	150	4,500
Diversified farming	40	150	6,000

The money required for equipment is grouped under CAPITAL FOR EQUIPMENT, according to the following subheads: —

Buildings.
Fences.
Implements and machinery.
Work stock and harness.
Live-stock, other than work stock, as hogs, poultry, and milk cows.
Special equipment, as dairy or poultry equipment.
Small tools and shop material.

For purposes of comparison and reference the outlays necessary to bring the various businesses to a self-supporting age are condensed in the following table:

TABLE II

Showing cost of equipping different types of farms

Segregated costs (round numbers)

Industry	Total equipment cost	Buildings	Fences	Implements and machinery	Work stock and harness	Live stock	Special equipment	Small tools and shop material
Grain	$5,925	$1,850	$783	$871	$2,154	$100	$69	$100
Fruit	3,260	1,300	65	1,438	342	25	20	70
Poultry	4,809	1,925	950	84	125	1,056	639	30
Dairy	5,670	2,245	65	403	467	1,950	470	70
Diversified farming.	4,494	1,950	302	432	684	670	386	70

SUMMARY — COST OF STARTING TO FARM

TABLE IV

Summary of Capital Requirements

(Round Numbers)

Industry	Land	Equipment	Establishing Business	Total to Establish Business
Grain	$19,200	$6,000	$2,850	$28,050
Fruit	2,400	3,300	1,500	7,200
Poultry	2,000	4,800	1,275	8,075
Dairy	4,500	5,700	2,200	12,400
Diversified farming	6,000	4,500	2,375	12,875

On four out of the five typical farms, it was found that more than $4,500 would be needed to pay for equipment. If living expenses to be paid before a living income could be obtained from the land, were added, the outlay in each case was over $6,000. According to this estimate, the first need of the Cal-

TABLE III

Showing capital required for living and operating expenses until industry is self-supporting.

(Round numbers)

Industry	No. of years	Capital for living	Feed for stock	Extra help	Material, repairs, seed, sacks, etc.	Water (assumed)	Taxes and insurance	Total capital needed	Possible returns	Capital operator must command
Grain	1	$600	$500	$700	$250	$400	$400	$2,850	....	$2,850
Fruit	5	3,000	750	75	200	300	175	4,500	*$3,000	1,500
Poultry	1	600	850	300	150	25	75	2,000	720	1,280
Dairy	2	1,200	325	300	75	200	100	2,200	....	2,200
Diversified farming.......	2	1,200	250	450	125	200	150	2,375	....	2,375

[*] Intercropped for five years. Figures are averages for beans, cabbage, Indian corn, peas, potatoes, sorghum, sugar beets, and tomatoes, figuring 12 farms of 20 acres, cropped and amounting to $3,000.

ifornia farm buyer is therefore a capital of over $5,000. The average outlay of the Durham farmers for the first year, nearly $7,000 per farm, confirms these figures.

Since the above estimate was prepared, the costs of labor, land, and material have all so risen that they are now about 70 per cent. above the prices prevailing three years ago. The cost of stock and implements needed to farm a grain ranch of 640 acres is now between $6,000 and $7,000. That sum would have paid for the farm twenty years ago. It has to be realized, therefore, that any successful scheme for helping poor men become farm owners must do far more than sell land on easy terms. To equip a poultry farm means an outlay in round numbers of $5,000; to stock and equip a dairy farm with 20 cows costs $6,000; while to start a 40 acre farm to growing diversified crops requires $4,500.

By helping to build houses and level land, the board thought that it could lessen somewhat the settler's outlay at Durham but not enough to make it safe for him to begin unless he could spend about $4,500 in making the farm ready for earning a living income. According to the California Act the sum which the board could lend to a settler was limited to $3,000; it ruled then, that the settler who was approved must have at least $1,500 either in money or equipment.

Settlers had to make a cash payment of 5 per cent. of the cost of the land. The California Board could advance 90 per cent. of the cost of the improvements; but since all the money advanced by the State had to be repaid with interest, it did not seem safe to accept settlers who had a capital of less than 10 per cent. of the cost of the improved farm. The board decided, therefore, that the settler must pay 40 per cent. of the cost of all improvements and that it could loan only up to 60 per cent. of the value of livestock. If this was to be the basis of credit, it was evident that the settler would need $1,500 of his own and all the money the board could lend him to get started so as to live comfortably and earn enough money to meet his payments.

The settler who started at Durham with the minimum capital has had a hard struggle and he has had to secure all the money the board could lend him to be able to pull through the first year. In some cases, settlers who had $2,500 each had to borrow money from the local bank to complete their improvements. There is not a settler who does not believe that the $1,500 capital required is as low as it should be. The majority believe that the minimum should be $3,000.

Nearly all of the Durham settlers believe that if the State is to be candid and fair with the beginner, it should add to this money requirement a provision that no one should be accepted unless he has a practical knowledge of farming in California. Anyone who had seen the hard work, the worry, and the fear settlers experience before there is income enough to pay interest on the investment, meet living expenses, and make the small payments of principal, will understand that it is not doing a settler a kindness to permit him to buy a farm unless all the money needed for equipment is in sight and unless he has had experience in the kind of work he has before him. The applicants for farms at Durham were asked to make estimates of the money they would need for improvements and expenses; and those who went very far astray were regarded as unsafe.

No feature of the first year's operations at Durham has been watched with more interest than the expenditures on the different farms as the houses and barns were built and fields prepared for waterings. In studying the records given in the tables which follow, it has to be kept in mind that the settlers were nearly all experienced farmers. Most of them had been tenant farmers. The money they brought with them had been accumulated by years of hard work and frugal living. Yet to get their farms in shape to earn money, they spent on each farm the first year, an average of $4,042 for improvements and equipment and for all purposes, including living expenses, an average of $7,343.24.

A list of the actual expenses of two of the settlers will show the number and the size of demands on the settler's purse in buying and improving a farm.

TABLE I

Land, first payment	$390.00
Temporary dwelling	200.00
Barn	700.00
Hog house	60.00
Fence	250.00
Well	240.00
Preparing land for irrigation	700.00
Ford car, second hand	300.00
Plow	10.00
Mower	60.00
Rake	25.00

Team	330.00
Miscellaneous tools	172.00
Harness	85.00
Chicken house	40.00
Household equipment	250.00
6 tons hay	76.00
Barley and mill feed	250.00
Cow	111.75
3 sows	200.00
20 pigs	600.00
74 chickens	74.00
	$5123.75

Table II

Land, first payment	$ 505.00
Dwelling	1127.50
Barn	525.00
Manger	25.00
Bridge	15.00
Small building	75.00
Hog houses	25.00
Preparing land for irrigation	1750.00
Well	40.00
Leveling	200.00
Wagon	125.00
Cart and wagon	40.00
Gravel cart	5.00
Plows, etc.	40.00
Mower, rake, track, fork	208.24
Harness	75.00
Small tools	75.00
Parts and cans	15.00
Forks	10.00
Grinder	7.00
Hay rack	25.15

Household equipment	500.00
60 tons hay	840.00
11 cows	1840.00
9 heifers	1250.00
1 calf	30.00
3 horses	450.00
Hogs	185.00
	$10007.89

In each of these cases more than the $3,000 which the board could lend the settler was needed to stock and improve the farm, although the settler paid only 5 per cent. of the cost of the land and he had the board's help in making improvements and planting crops. A part of the outlay of these two settlers did not come from capital but from the income from the farm the first year. This, in the case of some settlers was more than doubled by the service rendered by the board in putting in crops before the farms were allotted. The grain and alfalfa crops planted by the board in 1918 were bringing a return a few weeks after the settler went on the land and some of the alfalfa fields brought a money return in 1919 of over $150 an acre. All of this money which could be spared from living expenses was used to complete improvements or buy more equipment.

It will help to understand the tables which follow if some of the working expenses and the cost of livestock are given.

In 1918, it cost settlers from $36 to $83.93 an acre to have land leveled, checked, and seeded to alfalfa, an average of between $40 and $45 an acre. In 1919, higher wages of men and higher cost of teams brought the average price of preparing and seeding land to alfalfa up to $55 an acre.

In 1918, the settler could hire one man and four horses for $7.00 a day and he paid only for the days on which work was actually done. Early in 1919, the price had risen to $10.00 a day and the settler had to pay for each working day whether the man and team worked or not. Now farmers who have rice to harvest are offering $12.00 a day with board for a man and team.

The following are prices paid by settlers for livestock:

Horses	about	$175.00 each
Cows	Registered one herd	250.00 each
	Later purchases up to	800.00 each
	Grade Cows	100.00 to 330.00
Hogs Registered	Sows	150.00 to 250.00
	Gilts	75.00 to 175.00
Grades	Sows	45.00 to 65.00
	Gilts	35.00 to 50.00

The easiest part of the financing at Durham has been the sale and the improvement of the 26 farm laborers' allotments. The Act limited the value of the land which could be sold to a farm worker to $400. As the allotments were located where the land in farms was valued at $230 an acre, the area of the laborer's allotment had to be less than two acres. The Act has since been amended so that the farm worker's land may have a value of $1,000.

The farm worker's allotments were opened to settlement in two units, the first unit in June 1918, the second in November 1918. The average income, expenses, and capital of those who settled in

June, both farmers and farm laborers, are given in the table which follows:

TABLE I

Table of Areas, Expenses and Incomes on Farms and Allotments First Settled

	Average of Farms	*Average of Farm Laborers' Allotments*
Average Area	52.08 Acres	1.72 acres
Average price of land per acre	$ 191.70	$ 232.00
" cost of farm or farm allot.	8872.06	399.04
" first payment	444.32	19.95
" amount advanced by the State on land	8427.74	379.00
" half-yearly installment	332.91	15.16
" value of improvements	3168.85	828.09
" payment by settler on improvements made by State	332.92	107.06
" amount advanced by State on improvements and equipment	561.95	164.79
" half-yearly installment on improvements	13.29	4.61
" value of livestock	1569.92	186.46
" value of equipment	1382.19	314.92
" initial capital	6232.98	789.37
" present capital	6993.03	1285.32
" increase in net worth	760.05	495.95
" cash at start	4564.48	479.58
" income from farm and outside labor	2057.14	870.82
" cash paid out from cash on hand and income	6313.17	1272.72
" money spent on place	7343.24	1489.75
" balance of cash on hand, June 30, 1919	477.36	108.23
" money spent for buildings	1704.70	
" money spent for fencing	163.26	

	Average of Farms	*Average of Farm Laborers' Allotments*
Average Area	52.08 Acres	1.72 acres
Average money spent for leveling and checking	619.61	
" money spent for stock......	893.78	
" money spent for equipment	661.15	
" money spent for living expenses	480.00	
" money spent for operating expense (seed, feed, labor etc.)	1479.84	
" money spent for drugs, doctor's bills, trips on pleassure and the like........	311.16	

Every settler in the Durham colony has felt that the sooner he could get his farm fully improved, the better his chance of success. No one delayed work because labor and other costs were high. No one has wasted his money and little has been lost through mistakes. All have worked hard; from sun up to sun down has been the rule. Six have lost money on the year's operations; that is, the income from their farms has not provided living expenses and the money needed to pay interest and other charges. The loss in two cases was caused by sickness; in two others by the settlers' holding on to salaried jobs for the full six months allowed by the Act before beginning improvements. In the latter case the salaries provided the settlers a living, but interest charges on the debt for land unused were mounting up. Two settlers lost stock from an epidemic of anthrax which swept through the Sacramento Valley.

Those who went on their farms and began to plant crops and milk cows as soon as possible have made

Table II

Money Spent Improving Farms of First Unit

No. of Allotment	*Buildings*	*Fencing*	*Leveling and Checking Land*	*Stock*	*Equipment*
[1] 156	$ 140	$ 98	$ 65	$ ...	$ ...
157 & 158	4757	60	1720	825	649
159	1011	..	693	50	185
160	2650	100	443	660	400
161	960	250	1005	385	507
162	535	120	423	475	591
163	3150	304	1700	3081	1378
164	550	280	327	633	305
165	3120	100	673	903	555
166	225	...	550	800	...
167	1035	425	410	884	630
168	570	15	100	505	...
169	1607	408	725	880	757
170	925	...	380	24	137
171	1090	367	80	2500	1619
172	737	200	...	472	40
173	1526	...	1460	2173	1414
174	4990	850	346	...	100
175	1023	257	112	1400	130
176	2650	400	100	300	429
177	4850	...	200	2041	2403
178	6000	500	690	3205	667
179	1900	...	800	105	1125
180	800	...	250	220	1865
181	1010	...	...	400	1147
182	720	...	431	1500	990
183	950	...	1887	225	78
184	1792	200	784	1255	768
185	1250	130	800	...	...
186	380	25	100	80	75
187	1200	200	160	...	...
188	2100	100	1185	1180	486
189	1365	128	1827	1050	1286
190	402	34	666	590	441
Average	1704.70	163.26	619.61	893.78	661.15

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[1] The numbers in this column are not the actual numbers of the blocks.

the best showing. The three with the largest incomes owned the most livestock. Milk and alfalfa have been the two big items in settlers' incomes. On eight farms the first year's income averaged over $3,000, the highest being nearly $4,500. The cash capital of the farmers ranged from $500 to $15,000.

The farm laborers had a good year. Wages were high. There was plenty of work. The produce from their gardens had ready sale in Chico. This explains the remarkable average income of $870. One farm worker who has a team had a gross income of more than twice the average.

CHAPTER XII

THE FINANCIAL LESSONS OF THE DURHAM SETTLEMENT

JANUARY 1st, 1920, was the date on which settlers were to pay the third semi-annual installment on their farms. They had paid the two earlier ones, which was as gratifying as it was unusual in California colonies in the first two years of their existence. A part of the money for the earlier payments had come from the capital they brought with them. This had, however, all been spent. It had gone to buy livestock, to make payments on improvements, and to pay living expenses. This third payment, if made, had to come from money received from farm products. It had to come also from the surplus income after living expenses had been met. The amount of the payment would therefore be an indication of the solvency of the enterprise and of the determination of the settlers to keep faith with the board.

The payment was a large one. The half-yearly installment is about $40,000. It had been preceded by a heavy tax payment on the land, which every settler had paid. On January 5th the superintendent reported that of the *$40,000, $34,000 had been paid and that all or practically all would be paid before the end of the month.* Some settlers paid more than was due. The board was able to meet from this income all its obligations, including an interest payment to the State of the money the State had advanced.

So far as California is concerned, the Durham State Land Settlement is a money making venture. The county in which it is located will collect from taxes on the land $10,000 more than it did when this land was owned by two non-residents. The taxes on improvements will be far greater than before settlement, as they include over one hundred new houses and new barns and many additional herds of blooded livestock.

Even if no money had been paid by the settlers the enterprise would have been solvent, bcause during the last six months the settlers had spent more than double the payment in farm improvements. These included barns, silos, preparing land for irrigation, seeding fields to alfalfa, making ready for orchards, building dairy barns to produce Grade A. milk.

The value of the property is fully double what it was when the board bought it. All the improvements which the board agreed to make have been completed. Hereafter its expenses will be limited to administration. The engineering staff, the horses, the tools and implements, and the tractor, used in development, have been sent to another locality and are being used in preparing another settlement. The difference between what the board owes the State and what the settlers owe the board will far more than meet the expenses of administration. From a financial standpoint this settlement may be forgotten.

This unique record in meeting payments promptly and in the full amount has been made possible because the board helped settlers speed up development, helped build their houses, plant crops, buy livestock, and find a market for the milk of the dairy herds. If aid had ended with lending the money at a low rate of interest, few would have made a living the first year. To begin with, they could not have got their land ready and planted crops in time. It was the action of the board in contracting for teams, buying a 75 horsepower tractor, cultivating the ground, and planting crops when the ground was too dry and hard to be worked with the settlers' teams, that made the financial returns the first year so satisfactory.

Only those who have seen the individual settler struggle with the obstacles which irrigated agriculture presents can understand how costly and discouraging it is to work alone. Teams or engine power, the implements that the settler cannot afford, are the time saving, money saving, and money making agencies of the first year. Getting the right kind of start is perhaps the most important thing in a planned rural development, but following that there is a second critical period in which oftentimes the stimulus of an outsider is needed to bring the desired results.

There comes a time when the farm earns living expenses but not enough above this to meet payments on the settler's debt. When this period arrives the settler who has been speeded up by the enthusiasm and excitement of becoming a farm owner, is apt to relax. This is particularly true of middle aged settlers who come to the new undertaking with a small capital, because in the past they have been contented with simply earning a living. The suggestions and sometimes the admonitions of the superintendent are of special value to this class of settler.

One settler at Durham, in the second critical period, had grown fodder enough to feed 20 cows but was milking only eight and from these had an income of $100 a month from milk sales. That would have met all his living expenses, but it would be only about half the income he must have if he were to be a solvent member of the colony. There was feed for 20 cows on the farm and enough help in the family to milk them. With a herd of twenty the income would be $250 a month. But to buy the extra cows the settler had to go in debt and the whole family had to lead a busier life. Without the superintendent at his elbow, this settler would very likely take life easy until he got into arrears. He needed a business mind to encourage him and induce him to increase his herd.

The superintendent explained how the board would lend him money to buy the cows not reluctantly but willingly. He learned that by borrowing money he could not only more than double his income but also improve his credit. He got a new idea of his business partnership with the State and started in with renewed enthusiasm and fresh energy.

The fine milking herds at Durham have been largely purchased with money loaned by the board. These loans are only made to farmers who have an assured food supply. One settler who borrowed $1200 now has a cream check of $180 a month. He will pay off the loan in three years and have enough surplus to meet his land payments. A loan of $864 to buy more cows has increased another settler's monthly cream check from $80 to $160. It is expected that within the next three months, loans to settlers to help increase their dairy herds will reach close to $100,000 and will increase the yearly incomes from cream sales to four or five times what they were before the loans were made.

Generous loans of money are not of themselves enough. The profits of farming, even under the best conditions, are so small that the best kind of management, constant economy, and good cultivation are essential if a settler is to earn more than a living. In order to pay for a farm bought at the prevailing high land prices, one must bring the earning power of the land to the highest limit.

To reach such limit necessitates coöperation in buying and selling. It necessitates also group settlement with the resulting hope and courage in the hearts of many families living in the same manner and battling against the same obstacles. Paying for a farm is an enterprise which requires not only coöperation between families but also coöperation within the family. If the wife and the children feel this and work as partners in the enterprise, their work will not become laborious. On the farm, children are an asset. They can do light farm work as well as it can be done by men; and they will be healthier and happier from doing it, if they have a share in the return. Boys and girls can help pick fruit, care for gardens, look after chickens, and feed stock. If the hours are not too long, such work can be made as light and healthful as play. If children are given a share in the income they are proud to become working partners in the enterprise; they will be interested in their work and eager to do their share.

That farming is not wholly a man's work is quite clear to every one who has watched the settlers in Australia or at Durham during the early years when the struggle to get money enough to carry on the work of the farm was unending. The wife is so great a factor that, in the selection of settlers, the fitness of the wife should probably have the same attention as the experience and character of the husband. It is an old and true saying that the farmer's wife can throw out more with the spoon than the husband can bring in with the shovel. But the value of the wife as a partner does not depend merely on her skill and economy as a housewife. She can be a model household manager and yet if she hates farm life, she will likely be a failure as a farmer's wife. Buying a farm may be to her not an adventure, but a crucifixion. In too many American farm homes the man alone is interested in farming. The wife longs for the city. This is due mainly to two things, the removal from the farm of many industries for women in which knowledge and skill could be shown and the absence of training in farm work in our schools. Every one likes to do the things he can do well. The daughters of the tenant farmers of Scotland who complete the course in the dairy school at Kilmarnock get a better preparation for a useful and happy life on the farm than the American country girl gets in the country high school.

The more the farmer's wife knows about farming operations, about the tillage needed to give large crop yields, about the good and bad points in an animal, about how to set a hen and raise chickens, the keener will be her interest in rural life and the more likely she will be to resist the lure of the city. If she knows what is being done and how it should be done, there is far less danger of her finding the daily life dull and tiresome. The cheer and courage of the wife and mother is such a large factor in success that more must be done to fit her for her part in the enterprise.

As the cost of financing a farm has increased, more attention has been given in both Denmark and Australia to the training and experience of applicants. To-day no one in Denmark is accepted who cannot show that he is skilled in farm work and has worked on a farm at least one year. In the different Australian States, if the applicant can show that he knows how to farm well and that he has had actual experience with local conditions, he can get a farm on the minimum capital; while the inexperienced man is often rejected no matter how much capital he has.

When farms were being carved out of the fertile prairies of the Mississippi Valley or out of the forests in the East and South, when corn sold for from fifteen to twenty-five cents a bushel, the farmer's training, his skill as a cultivator and his ability as a trader were not vital factors in his success. Increases in land price rather than income from crops were the chief source of rural wealth. The unskilled farmer did almost as well as the skilled one. If he made a living and held on to his land, the unearned increment did the rest. But to-day high prices of land and of labor require the use of all the skill that science and training can give.

In a recent conference with the settlers at Durham it was pointed out that a new area was soon to be offered to homeseekers. In order to give people in the second settlement the benefit of all that had been learned in the first, the board asked for suggestions regarding changes in the conditions under which settlers should be accepted.

All the Durham settlers were of the opinion that no one should be accepted unless he had lived on a farm in California and unless he knew how to do the kind of work he would have to do on the farm applied for. Many thought that no family should be accepted if the wife had not lived on a farm. They said that wives who had lived in cities and who did not understand farming operations were uninterested in the new farms and were as a rule lonesome and easily discouraged.

Fifty years ago people liked to live in the country because the farm was a center of arts and industries. Cloth and carpets were woven on the farm; butter, cheese, and breadmaking were rural industries. A cobbler's bench to repair shoes and harness and a kit of carpenter's tools were found on every good farm. Nearly everything that the family ate was grown on the farm and the children were trained in a wide variety of crafts outside of farming operations. As the arts and industries of the farm were stolen away by the cities, country life became narrower and more monotonous.

The arts and industries will not return, but their place is being taken by the new care, skill, and knowledge of cultivation and marketing required by high priced crops. The interest and the ability needed to breed and sell pedigreed stock are worthy substitutes. The boys' and girls' pig clubs and stock judging contests are moves in the right direction, which will be strengthened when we give to the training of the girl the same attention that is being given to the training of the boy. Dean Hunt of the University of California hopes to establish in connection with the University training farms for both boys and girls similar to those at Odensee in Denmark.

Successful farming demands that in all rural schools more attention should be given to the practical training of girls and women. Our schools today fail to give them the knowledge needed to make farm life attractive and make no attempt to develop the skill that would help make their future tasks sources of pride and satisfaction. Practical training for farm life should take up such topics as those in the following rough outline:—

1. The Housewife.
    - (a) Duties of the housewife, moral, social — principles of domestic economy.
    - (b) Instruction relating to infants and children.
    - (c) Hygiene — care of invalids.
    - (d) The care of the house, furniture, utensils, etc.
    - (e) Feeding the family, comparative value of foods, using the produce of the farm and garden.
    - (f) Cutting out, making, repairing clothes and linen.
    - (g) Washing.
    - (h) "Agriculturalising" the good housewife.

2. The Woman in Relation to the Farm.
    (a) The domestic animals, dairying, rabbits, bees, etc.
    (b) Agriculture (a few underlying principles) the soil, manures.
3. The Housewife and the Garden.
4. The Country Woman and Society, Institutes, Clubs, Coöperation, etc.

A farm school for girls and boys is one of the things that will soon be needed at Durham. The environment of the two or three hundred children on the farms and the coöperative enterprises of the settlement are unique educational influences that should be supplemented by a definite course of schooling.

The Durham settlement is no longer an experiment. It is a solvent undertaking which should be a valuable example for the rest of the country. Since none of the other States have outlined definite plans for land settlement, they are in a position to make full use of all the teachings of the first California State Settlement. These may be summarized as follows:

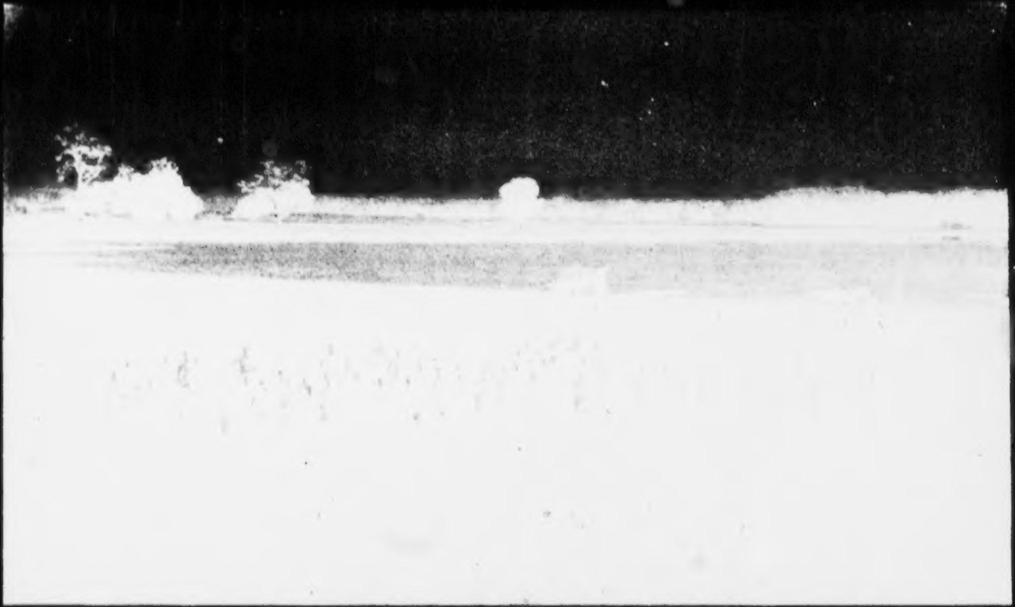
1. All the factors that control health and production should be studied before land is bought.

2. The price to be paid for land should be fixed on what can be made from its cultivation. In California safe tax free securities can be bought at prices which give a net income of 5 per cent. Taking 5 per cent. as the income basis, the capital value of land would be the net income from crops multiplied by 20. If the net income from the land after taxes, upkeep, and labor costs have been deducted is $60, the land should be worth $120 an acre. If the net income either from rents or crops is 20 an acre, then the land should be worth $400 an acre.

There are, however, large areas of unimproved land with great possibilities, but with no actual income or scarcely enough to pay taxes. The purchase price of such land depends on what it will cost to improve and equip the farms. Where irrigation is necessary, these costs are always underestimated and the price of the unimproved land is put too high.

3. Only groups or colony settlement should be attempted. Where the credit of settlers is based on character and on the returns which can be obtained from good cultivation and management, the use of the money which is loaned must be watched carefully. This can be done only when the men who control credit are in close personal contact with the settlers and their farms. Those in control of credit must be in a position to see all the time whether the colonists are saving, industrious, and efficient.

4. Coöperation is, or soon will be, an essential of rural progress. It serves to lessen the amount of credit required. It effects a great saving as in buying pure bred bulls, boars, and rams for the community instead of for each farmer and as in buying for the community, tillage implements which the single farm cannot afford. The community tractor and implements for cultivation in use at Durham cost $12,000. No settler could have bought these; yet half the settlers would have lost money the first year if they had not had the help of these implements in preparing land for crops. The milk chilling and separating plant is saving settlers thousands of dollars, but it had to be built on community coöperation and credit. No single settler or small group of settlers could have made it a success.



AUSTRALIAN SERVICE MEN ON VISIT TO DURHAM

Recently the Durham stock buying committee attended a dispersal sale of a fine Holstein herd. Its purchases cost $6,000. To pay this it had to have short time credit, for the cows had to be brought to the settlement so that the settlers could inspect them and arrange for payments. The Coöperative Association has such credit. It borrowed the needed money from the Durham bank at 6 per cent. interest. An isolated individual settler or a small unorganized group of settlers could not have done this.

5. Every settler should have enough capital to protect the State against loss which might come from lack of thrift or experience on his part and to protect him by a reserve of credit in case he should be unable from any cause to meet his payments. The minimum should not be less than 10 per cent. of the cost on the improved farm.

6. Title to the land should be retained by the State for at least ten years. During that time residence on the land by the owner or some member of his family should be required, but sickness should be a reason for waiving this requirement. The need for restrictions on tenure are greater in America than in almost any other country because the besetting sin of the American land buyer is his practice of thinking of a farm not as a permanent home but as something to be sold at a profit. The effort of the State to help men become homeowners would be worse than thrown away, if the farms it provided were to be trafficked in by dealers.

7. While the tenure should prevent speculation, it should safeguard ownership. Both men and women will work harder and with greater satisfaction

to become owners than they will to secure any form of leasehold tenure. If it were not for this, a perpetual leasehold with the title to the land held by the government would have a decided advantage. It would enable the settler to use all his capital for improvements since none would be needed for payments on the land. A perpetual lease, with the right of children to inherit, gives as secure a tenure as a freehold title where the land may be sold for unpaid taxes.

8. Land should be so prepared as to enable the settler to derive an income as soon as possible. Where land has to be irrigated, water for irrigation should be provided before the land is offered to settlers. The smaller the settler's capital, the more desirable it is that a part of the land should be in crop. Arrangements for lending money and helping to build houses should always be features of planned development.

9. In planning a group or community settlement where settlers are to be aided with advice and credit, provision should be made for meeting the following overhead expenses:— Interest and upkeep expenses on headquarters grounds and buildings; the salaries and expenses of a superintendent, a stenographer, a bookkeeper, a farmstead engineer, and the foremen needed to oversee the early development. If the land has to be drained or irrigated, the salaries and expenses of an engineering staff must be included.

These overhead expenses will be heavy for the first five years. After that, bookkeeping and collections will be the main expense items, unless the government, as it has done in Australia, becomes a partner with the community in coöperative factories.

10. The number of settlers must be large enough to create a distinct community life,— to encourage them to adopt new and improved methods of farming, to have pure bred stock, and to buy and sell coöperatively. This number will vary in different sections. In England 100 holdings have been made the minimum. In most sections of this country, the minimum should never be less than 100; and 200 would give better results.

CHAPTER XIII

HOMES FOR SOLDIERS

All of the English speaking countries except the United States have passed special soldier settlement legislation and made appropriations therefor. Where good free land exists, that is offered to soldiers. But even when such free land exists, ex-service men are commonly given assistance in buying private land. In some cases private land is purchased by the state in blocks and sold to individuals in small tracts. In England, New Zealand, and the Australian states of Victoria and New South Wales, the government has been buying privately owned land as homes for soldiers. Land settlement boards that existed before the war have had soldier settlement added to their duties. Where land boards did not already exist, they have been created, except in some of the Canadian provinces where the Minister of Lands or of Agriculture and Forestry assumes the functions of a board.

Placing soldiers on farms and giving them aid and direction are largely in the hands of local committees. Canada and Australia, which have federal governments, have worked out plans for co-operation between the states and the central government. Usually the central government provides the money and the states have direct and responsible charge of placing the settlers and helping them to get established.

Some training and some practical farm experience are expected of the soldier. If applicants do not have these, they are provided from three main sources: employment on farms, special courses in Agricultural Colleges, and special training on farms associated with the soldier settlements.

Aid to the soldier in the above English speaking countries, aside from the United States, takes a variety of forms. There are, first, the allowances which are given a soldier for himself and family in the probationary period of working and beginning of experience, such as the transportation which all of the countries offer the soldiers when they are traveling to training stations or to the land; second, either the giving of land or the selling of it to the soldier at the cost of purchase and subdivision; third, the supplying of advice, guidance, and instructions; fourth, the supply of grading, farm tools, and sometimes farm animals free or at cost (under this head may be mentioned the supply of seeds and fertilizers); fifth, credit advanced for the taking up of mortgages and incumbrances, for clearing, leveling, and ditching of lands, for erection of fences, buildings, barns, and houses, for the building of homes; sixth, assistance in the organization and maintenance of coöperative buying and selling associations.

In every instance the payments for the land or for the reimbursement of the state for advances are stretched over a long period of time. The period of payment varies from 20 years, as in Ontario, to 36½ years, as in the Australian states.

Advances for stock and developments are repayable in from 5 to 25 years. The interest charged is seldom more than ½ cent more than the interest paid on public securities.

Soldier settlement is as important in America as in any of the other English speaking countries. The return of nearly 4,000,000 ex-service men to civil life has gone on quietly; but while they have been absorbed in civil pursuits, many of those who formerly lived in the cities desire the open life of the country. Old habits have been broken up; and the new ones formed in service lead men to look towards farming with greater favor than in the past. Some of the injured are advised to take up farming as the best means of restoring their health and strength. Those who have given most attention to the subject believe that the soldiers' need and desire for farms should be gratified, not for their good alone, but for the national benefits which would result.

In order for both the ex-service man and the nation to secure the greatest benefits from a soldier settlement policy, the plan should provide for the creation of group settlements. It has been shown elsewhere that the greatest opportunities for these settlements are in the sections of the country where agriculture is neglected, or where there are great areas of undeveloped lands. The opportunities for group settlement in the New England and Atlantic Seaboard states are perhaps unsurpassed anywhere in the nation and the benefits that would come from a development planned by agricultural experts would be of immense and enduring value. There would be no difficulty in securing large areas of land in these sections, in placing settlers thereon, and in developing an agriculture and a social life far more progressive than the one displaced. No such results would come from lending individual ex-service men money to buy isolated farms in these areas. Such individuals would not farm any better than their neighbors. They could not introduce coöperative buying and selling. They could not have the benefits of expert advice and direction. They could only continue the prevailing kind of agriculture and fall in with the prevailing business methods.

The greatest benefits of group settlement would, therefore, be lost; but this is not the only drawback that would come from financing individuals in an unorganized way. It is already known that a large percentage of the ex-service men who would apply for farms are city men with no agricultural experience. This is shown in the applications made to the California Land Settlement Board by soldiers and sailors. More than half of these applications are from city bred men who have come back from the war with a desire to get out into the open country, or who have families that have had this desire awakened in them. A study of the applications made by these inexperienced people shows that they will need constant friendly personal oversight if this attempt is not to end in disappointment and heavy loss both to the individuals and to the government; and that kind of oversight can be secured only in a community development. Furthermore many of those who want to get out on small farms are artisans. In a planned community development, which will need carpenters and blacksmiths and shoemakers and tailors, they can be given small places where families can grow vegetables and poultry and live in the open while fathers or sons can earn wages in the kind of skilled work they understand. Many such adjustments are already being arranged for in the California settlement that is soon to be established; they would be essential in all soldier settlements properly organized as communities.

In the United States, soldier settlement in organized communities, if once well started, would soon give rise to a national policy far broader in scope. There are few opportunities for planned rural development equal to those now ignored in the Atlantic seaboard states. All the way from Maine to Florida are neglected, thinly peopled areas varying from ten thousand to a quarter of a million acres which only need the aid of science and organized community action to begin a regeneration which will create a rural life as significant and successful as that of Denmark.

The recommendations for planned settlement made by Secretary Lane and his advisors were reflected in bills introduced in the House by Congressman Mondell and in the Senate by Senator Smoot, both of whom had taken part in the settlement of the arid region and knew the value of organized community effort in irrigation. Nevertheless, when these bills came before the committees, they ran against the rooted dislike of the American legislator for responsible government operation of any social or industrial enterprise. The Mondell bill would mean better opportunities for poor men; it would create a new and better rural civilization in neglected areas; it would mean better living and better farming if the Government acted with the wisdom and efficiency shown in like efforts in Denmark and Australia. But the really valuable and important proposal halts while donations of money or financially dangerous proposals for loans to individuals for buying scattered farms are being considered as adequate substitutes.

The two policies for helping soldiers own farms in the United States reflect two different ideas of what our Government ought to be and ought to do in many other fields. The Mondell bill is based on the idea that the value of government in the future will be measured by its economic efficiency and its social justice.

Those favoring loans to the individual and leaving each borrower to look out for himself, do this in part, because of a deepseated dislike to becoming responsible for the results of government action. Such dislike grows out of the fact that the Government at Washington is so badly organized that it is far from the rule to have any business undertaking carried out cheaply or on time. The day has come, however, when the Government must take a responsible part in aiding rural development and in helping to shape rural civilization. Such a responsible part the Government will, it is believed, yet be willing to take in connection with soldier settlement.

CHAPTER XIV

THE FUNCTION OF GOVERNMENT IN SOCIAL AND INDUSTRIAL DEVELOPMENT

THE social and political upheavals of Europe have reached across the ocean and are forcing the government of this country to adopt new policies. Here, as in other warring countries, the benefits which come from a widely diffused ownership of land are being realized as never before. Political danger comes mainly from the unrest of the industrial worker. He is dissatisfied and is inclined to struggle not only for shorter hours and higher pay but for a new relation between him and his employer. Having no clearly thought out plan of how this result is to be brought about, he makes the city the breeding ground for the cruder and more violent forms of socialism. The town artisan who contrasts the millionaire's income with his own salary, the ease and freedom in the life of the rich with the monotonous routine of his own work, is inclined to adopt remedies that are worse than the disease.

No such dangers confront government from the unrest of the farmer. He works harder but receives no larger pay than the city artisan. Yet this has not led him to join in a class warfare because he is both laborer and capitalist. It is therefore truer now than in the time of Aristotle that " Where husbandmen of small fortune predominate, government will be builded by law."

In 1918 Congress appropriated to the Department of the Interior $100,000 to pay for an investigation of the opportunities for reclamation and settlement of the swamp and neglected lands of the humid parts of the United States. The investigation was made by a commission appointed by Secretary Lane and headed by A. P. Davis, Director of the U. S. Reclamation Service.

As a member of this commission, I visited nearly every State along the Atlantic seaboard and came to the conclusion that the neglected cheap lands of these States offer better opportunities for a planned rural development than do the higher priced lands of the Middle West or of the Pacific States. There are large areas in Virginia and Maryland, for example, where 70 per cent. of land once fertile and productive, has gone out of cultivation and is now scarred with gullies and covered with weeds and brush, a melancholy example of an unplanned and destructive agriculture. Once these areas included some of the best farms in the country; and under a carefully thought out program of crop rotation, the soil could undoubtedly be restored to its former condition. Thousands of acres could be bought for less than $25 an acre in areas large enough to insure cooperative community organizations of from 100 to 200 families. Each area could be subdivided so as to provide every farm with enough fertile land to produce a good living income; while the rougher land which could not be plowed without serious erosion could be set aside for pasture and permanent timber.

Coöperative arrangements for buying and selling similar to those which now prevail at Durham would enable settlers to get started with less capital than is required on the costly lands of the Western States; the economic benefit to the nation would be far greater. While the returns for a few years would not be so great as in California, the investment and the hazard would be much less. The communities would be near good local markets. They could organize selling agencies which cannot be instituted successfully by individual farmers, so that their produce could go direct to consumers. This would mean lower food prices for city workers.

To-day great areas of land in every State from Maine to Florida are farmed badly either by tenants or by discouraged and discontented owners. They believe they are opposed by forces whose nature they do not clearly understand and with whose power they are not able to cope. Great areas suffer from folk depletion. Many landowners left the South for the West after the Civil War and helped to build a new civilization all the way from Missouri to Oregon. The farms they left were turned over to tenants. Farther North immigration to the cities and to the West carried away the most energetic sons and daughters of the farms. If they had remained, there would have been no decline in the agriculture of New England. They took to the West and to the city the spirit of initiative, a spirit lacking in those who remained behind. A farm does not stand still; when it ceases to improve it begins to retrograde. The New England farms support less people, less cattle, and less sheep than they did half a century ago. What they need is a return of people imbued with new ideas.

Such a return will not come through any sporadic or local effort. No adequate change will come from private enterprise, which lacks continuity, reserve of resources, and, most important of all, the confidence of people ready to become members of new rural communities. The great results which have come from Danish closer settlement would never have been achieved without government aid and direction. The fine rural life of New Zealand and Australia would not exist, if land settlement had been left to private enterprise.[1]

When our legislative machinery was devised we were a small, weak nation; parliamentary control was in its infancy. The government plan adopted was a compromise not wholly satisfactory at the time, yet it has been retained without material improvement for more than a century. During that century England has repeatedly reformed her parliamentary procedure until it is now far superior to what it was a half century ago, and immeasurably better than ours. Our system is quite obsolete, when compared with the systems of other progressive democracies. In the past it did not have to deal with the immense and complicated industrial and economic problems of one hundred million people; in the present it is inadequate to do so. To ignore its shortcomings and leave it unchanged because it met the needs of our ancestors is as costly and illogical as it would be to continue using tallow candles for lighting or ox carts for travel.

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[1] Much of what follows is taken by permission from the author's article in the *Metropolitan Magazine* of January, 1917.

Largely because our legislatures are not responsive to the popular will, we have fallen behind England, Germany, and France, and still farther behind the English speaking democracies of Australia and New Zealand in our industrial and social legislation — the very things which exalt democracy and in which we should lead. Our condition might be regarded as tolerable were it not for the fact that we are beginning to realize that in the development of resources or extension of commerce no agency equals the State as a coördinating force. The countries which have gone farthest in using the Government as such a force have become our most active and successful business competitors. As a result, there is a growing feeling that our Government should became a more effective business partner of the people in what H. G. Wells calls "The everyday drama of human getting."

The growing feeling, however, has been marked by a seeming inability to think economic problems through to a finish. We seem unable to make results square with our purposes. Few of our political leaders have made a study of industrial or social questions. There are too many lawyers and too few industrial authorities in Congress and in our State Legislatures. Political campaigns have appealed more to emotion than to reason; ability to talk has had more recognition than clear thinking, directness, or demonstrated efficiency in the fields where ability is most needed. While every corporation is constantly looking for men of capacity and ready to recognize and reward them, the public service brings neither honor nor adequate compensation. As a result, our ablest men find their greatest reward in the services of corporations. They will continue to do so until we realize the overwhelming price we are paying for lack of expert direction in public affairs. Because our tariff bills are largely political, schedules are so manipulated that they often destroy industries rather than foster them. Labor, instead of being protected, is left open to the free competition of the poorly paid men of other lands; in some industries laborers work here through longer hours, under harder conditions, and for less pay than in free-trade England.

There is a mistaken belief that waste and inefficiency are inseparable from self-government; that it is a price we must pay for political freedom. As a result, things which in other countries are better done by the government, are here handed over to private enterprise; important matters attended to elsewhere by governmental agencies are here ignored. We have only to compare the limited governmental activities of this country with those of democratic Australia and New Zealand to realize that political freedom is not involved.

In Australia and New Zealand the government (state or national) owns and operates the railways and the telegraph and telephone systems. It owns and operates nearly all street-car systems, all express lines, and all the letter and parcel posts. It owns and operates nearly all irrigation works and a large number of water works which supply cities and towns. The national government exercises control over and finances water works operated by the state or by municipalities — almost none are privately owned. The State also owns and operates coal mines, and saw-mills in state forests — a recent extension of state activity, arising out of the need of placing a check on the prices charged by coal and timber monopolies. The State owns many of the wharves and docks of the seaports. It owns and operates ship-building yards and cold storage warehouses, thus placing the small producer of fruit, meat, and butter on an equality with the great shippers. It makes contracts with the steamship lines for the transportation of perishable products to Europe. It inspects all shipments of butter and meat and fresh fruit and requires them to conform to certain standards so that the unscrupulous shipper may not destroy the market of the reputable one. As a result of this activity, freights have been lowered and service improved until now the Australian producer ships butter 12,000 miles for 1 cent per pound and fresh meat the same distance for ¾ of a cent. The owner of a dozen eggs living miles in the interior of Australia can transfer them to government cold storage, have them sold in London, and get the proceeds. Australia is three times the distance from London that Eureka, California, is from New York, but the Australian dairyman can ship his butter to London for one-third of what it costs the Californian to ship his to New York.

Australia recognized the fact that one of the requirements of civilized society is an adequate supply of pure water for household and industrial uses and in arid lands for irrigation. The greater the population and the higher the civilization, the greater the value of water and the greater the need for public ownership and control over both the sources of supply and the means of distribution. In order to make state control of water supplies effective, the Australian States retain the ownership of the beds of streams and of strips of land on each bank from one to three chains wide. This makes the State the sole riparian proprietor. Riparian rights — an archaic survival of a different industrial age — has no recognition. This part of the British Empire has freed itself from the costly and absurd conditions of a doctrine which we have unwisely retained. In America the state has largely ignored the significance of water control or has shirked the responsibility which adequate action would involve. Our country has been profligate in granting perpetual rights to streams and then leaving the holders of these rights to fight for control through continued contests in the courts. Such action has cost American irrigators millions of dollars; and the final settlement is as remote as in the beginning, because each decision opens up fresh ground for controversy.

Under the public control of Australia, water-right litigation is unknown. The state holds as part of its social creed that each generation has an obligation to the generations that are to follow. The control of resources on which all depend is, therefore, retained by the state. The publicly owned strips of land along the margins make rivers and brooks forever accessible to all the people. The owners of the great landed estates cannot exclude the nasses from the enjoyment of their beauties and their opportunities. The Australian millionaire and the Australian tramp can fish off the same log. Both have the same rights.

State forest areas in Australia are numerous and widely distributed. New areas are being planted. Coal mines are leased, not sold. Thrift is encouraged by a State Savings Bank, which in addition to interest pays the depositors a share of the profits. What this means to wage-earners is shown by the fact that nearly one-half of all the people in the Commonwealth are depositors. Out of a total population of 1,400,000 in the State of Victoria, 735,000 are depositors in the State Savings Bank. Each State has a comprehensive, generous, and successful system for aiding poor men to buy farms and city clerks and mechanics to pay for homes. In the State of Victoria 4,000 families have been able to secure farms in the country, and 6,000 workmen homes in the city which they could never have attempted to secure without state aid and direction.

The best feature of the Australian state activity is that it has not been handed down from above like that of socialized Germany; it has been created and is maintained by the free vote of the people. They have incurred great responsibility and heavy expense in the belief that there can be no really free society, no genuine democracy, so long as want and misery exist in the midst of abundance.

Many Americans believe that such a program in this country would tend to weaken the self-reliance, the initiative, and the independence of the people. But experience has shown that this is not the case.

The conduct of Australian troops in the war, and the remarkable development of the country could only come from a brave, self-reliant, and energetic people. Paternalism like that of Australia, which creates opportunity for industry and thrift, awakens hope, arouses ambition, and strengthens belief in the brotherhood of man, is altogether good in its influence on character and on the prosperity of the State.

Two years ago a flood in Southern California washed away houses, killed live-stock, and flooded orchards. Settlers in the flooded area not only lost money, but were in danger of losing their homes if the damages to farms and orchards were not at once repaired. To repair them required the expenditure of a large amount of money, which the farmers did not have and could not borrow on their own credit. The only relief under our badly organized State was through private philanthropy. The Board of Trade and the Chamber of Commerce of San Diego were appealed to. Many public spirited, generous people dropped their business to canvass for a fund; a private committee took up the task of determining the relative urgency of those in need of aid. This was, of course, vastly better than nothing; but there were delay and uncertainties; and the relief which was finally extended was wholly inadequate. This method of dealing with recurring situations is wasteful of time and wholly unscientific. Public spirited and generous citizens bear the whole burden; the stingy and selfish, regardless of ability, contribute nothing; and there can never be any certainty that the desired result will be achieved.

In another case relief was not even attempted.

There was a time when Wyoming was the greatest cattle growing State in the West. It had reached this position because the industry was managed by men of unusual intelligence and thrift. No State ever had a more useful or valuable body of citizens. As far as could be judged by past experience, they were conducting their business on a safe and practical basis. But there came a winter with unprecedented storms. In the valley of one river 100,000 steers were victims of its awful severity.

Men, through no fault of their own, lost the earnings of a life-time and had to become wage-earners. The State had to wait ten years before its ranges were re-stocked and railway range traffic reached its former proportions. Banks and merchants failed because stockmen could not pay their debts.

In this wreck of community prosperity no one appealed to the state to act as a business partner and help its citizens to continue the business which they understood and which public interest required they should still direct. Every one regarded the Government as having no obligation toward the ruined industry. The State was solely a political institution with no direct concern in human endeavor or in the individual success of its citizens.

Here was the narrow political view of the State's functions and its inevitable result. Some of the recent economic history of Australia will illustrate the benefits which flow from a different conception and a larger use of the States' powers.

In 1914 a drought began in Victoria, Australia, more severe than any before known in that land of limited and uncertain rain. It came upon newly settled districts struggling with the burden of the world's war. Streams ran dry, reservoirs were emptied, cultivated crops outside of irrigated areas withered and died. But public opinion held unanimously in that country that it was the duty of the Government to use all its powers to mitigate the suffering and the loss of the afflicted districts. And the Government acted with the promptness and the decision of an American corporation. The state railways moved the starving stock from the dried-up wheat farms of the interior to the green state forest along the sea-coast. Employment for farmers and farmers' families was provided by building state irrigation works to fertilize new areas, by extending railway lines into new territory, and by constructing state highways along routes long before selected. Every man who wanted work was given it. Those who would not work willingly had no excuse to remain idle and be supported by mistaken charity.

The emergency action in rescuing starving stock and in providing employment and a living for distressed farmers did not end the State's activity. It was, in fact, the least instructive and scientific part. When time came to prepare for sowing the next season's crop the drought had not ended. It was impossible for the farmers to return to their homes without financial aid. Hay and grain needed to feed teams in plowing and seeding could not be obtained anywhere on the Australian Continent. It had to be shipped across the ocean from either North or

South America. Many of the farmers were new settlers with neither money nor credit. Unaided they could not cope with the situation; but unless the wheat lands were planted the Nation would face starvation and bankruptcy the following year.

The Australian Government, the people's business partner, called a conference of merchants and bankers in the drought stricken area and proposed that together they finance the planting of the next wheat crop:— the State to provide seed wheat and feed for work animals; the merchants to provide food and clothes for farmers' families; the bankers to supply money needed by storekeepers. The relief program was to be carried out under the direction of state officers. The State was to charge 5 per cent. interest, and the bankers and storekeepers 6 per cent. Each farmer helped was to sign a contract under which a certain proportion of his next year's crop was to be set aside to repay money advanced.

In this way the farmers in half a state were grubstaked. They moved their families and teams back from the sea-coast into a land where the skies were like brass and the earth looked like a desert. The state railway hauled water for household and stock use. The State chartered ships and transported 50,000 tons of hay from America, over 7,000 miles. It spent in doing this about $3,000,000. What the storekeepers and the banks furnished is not known, but their contributions probably equaled those of the Government. Under this arrangement the farmers' extremity was not the banker's opportunity. The outcome was the largest acreage of wheat in the history of the state. Rains were timely and abundant;

the yield nearly doubled that of the greatest previous harvest.

Then a new complication arose. When the crop was ready to market, there were no buyers. The local demand would absorb only a small fraction of it; war had drawn most of the ships to other parts of the world; and the freight on a bushel of wheat was more than the selling price in Liverpool. The individual farmer in Australia was as helpless as the individual stockman in Wyoming, or the individual settler in California. In these straits the marketing of wheat was made a Government matter. The aid of the British Empire was invoked and gained. The ships which carried soldiers on their decks had their holds filled with wheat.

Here was a field for the speculative wheat buyer, who was keen and ready to reap the profit arising out of the Government's aid. To prevent this the Australian Government bought the wheat. A proclamation stopped all private buying on a fixed date. The Government paid the farmers 75 cents a bushel, cash, and is to pay more when sales are completed and expenses, including interest, have been deducted.

The outcome of this transaction, involving the purchase of over 150,000,000 bushels, has been the restoration of hope and confidence to a body of panic-stricken farmers and business men. Without state action nine bushels of wheat out of ten would have had neither buyer nor market; through coöperation of the Government and the people a business disaster of appalling proportions was averted. The state, the country storekeepers, and the bankers have been repaid the money advanced to grow the crop, or they will be repaid before the transaction is closed.

. . . .

California has begun to create communities organized to act efficiently as communities and endowed with a civic spirit unknown in planless development. The land for the second colony now being made ready for settlement includes two towns. Here the functions of a town are being provided for. There are broad straight streets for business and narrower winding streets for homes. Railroad tracks will run past the factories and warehouses needed to serve the surrounding country. The County Farm Bureau has already selected the place for its yards and warehouses. There will be a public cold storage warehouse with individual boxes for the uses of farmers and townspeople like the one at Chico. The school grounds will be large enough for vocational training and agriculture. The Plant Industry Gardens maintained by the United States are expected to contribute rare and unusual plants for the decoration of this school garden. And there will be a community center where gatherings of the people of the surrounding districts can be held.

Ten years from now the difference between a town boomed by a real estate speculator and a town and country planned by a State Board will show Californians that their State was mindful of its responsibilities.

The response to what the State has done makes its efforts seem very small when compared with the demand for the opportunities which planned development offers. Not a lot in the new town has been sold, not a farm in the new tract has been made ready for the cultivator; yet more than 3,000 people have registered as applicants. In the first ten days open for applications, 574 people applied in person or by letter. Three-fourths of these were ex-service men who long to restore what they lost in France by a life in the open.

Even if the State could provide community units equal to the demand, its effort would be only a small part of the constructive help which the people need in order that rural democracy may reach its full fruition.

In California as in other American States, rivers need to be conserved and forests saved from the devastation of ax and fire. The fertile soil of hillside farms needs to be saved from the destructive effects of erosion. Agriculture which impairs soil fertility must be discredited. In the arid States, the relative rights of irrigation and power should be ascertained and defined; a definite plan of future development should be prepared. Real estate tax laws based on unimproved values with a higher rate for great estates and those held by non-residents would help to break up large holdings, increase the rural population and forestall more radical remedies. Such restrictions should be placed on tenure as will prevent the holding of great areas of land by non-residents. More effective laws are needed to protect rural civilization from the impending menace of alien ownership. What has been accomplished is only a germ of the things that ought to be done to make rural life a real social and industrial democracy.

APPENDIX

THE CALIFORNIA LAND SETTLEMENT ACT

(Stats. 1917, p. 1566; Stats. 1919, p. 838.)

An act creating a state land settlement board and defining its powers and duties and making an appropriation in aid of its operations.

The people of the State of California do enact as follows:

SECTION 1. The legislature believes that land settlement is a problem of great importance to the welfare of all the people of the State of California and for that reason through this particular act endeavors to improve the general economic and social conditions of agricultural settlers within the state and of the people of the state in general.

SEC. 2. The object of this act is to provide employment and rural homes for soldiers, sailors, marines and others who have served with the armed forces of the United States in the European war or other wars of the United States, including former American citizens who served in allied armies against the central powers and have been repatriated, and who have been honorably discharged, to promote closer agricultural settlement, to assist deserving and qualified persons to acquire small improved farms, to demonstrate the value of adequate capital and organized direction in subdividing and preparing agricultural land for settlement, and to provide homes for farm laborers.

To carry out the objects herein stated there is hereby created a state land settlement board to consist of five members appointed by the governor to hold office for a term of four years and until their successors have been appointed and shall have qualified; *provided, however,* that of the members first appointed two shall be appointed to hold office until the first day in January, 1918, one until the first day in January, 1919, one until the first day in January, 1920, and one until the first day in January, 1921.

The governor shall designate one of the members as chairman of the board and director of land settlement. The secretary may or may not be a member of the board. The board shall appoint such expert, technical, and clerical assistants as may prove necessary, and shall define their duties. It shall fix the salaries of all employees, with the approval of the state board of control.

The four members of the board shall receive a per diem for each meeting attended, and the chairman shall receive a salary, said per diem and salary to be fixed by the state board of control with the approval of the governor. The members shall also receive their actual necessary traveling expenses in the discharge of their duties.

The said land settlement board shall have power to coöperate with and to contract with the duly authorized representatives of the United States government in carrying out the provisions of this act. (As amended Stats. 1919, p. 839.)

SEC. 3. The state land settlement board, hereinafter called the board, shall constitute a body corporate with the right on behalf of the state to hold property, receive and request donations, sue and be sued, and all other rights provided by the constitution and laws of the State of California as belonging to bodies corporate.

Three members of the board shall constitute a quorum and such quorum may exercise all the power and authority conferred on the board by this act.

SEC. 4. For the purposes of this act, the board may acquire on behalf of the state by purchase, gift or the exercise of the power of eminent domain, all lands, water rights and other property needed for the purposes hereof, and may take title in trust and shall without delay improve, subdivide and sell such land, water rights and other property with appurtenances and rights to approved bona fide settlers; the board shall have the authority to set aside for townsite purposes a suitable area purchased under the provisions of this act and to subdivide such area and sell or lease the same for cash, in lots of such size, and with such restrictions as to resale, as they shall deem best; *and provided, further,* that the board shall have authority to set aside and dedicate to public use such area or areas as it may deem desirable for roads, schoolhouses, churches, or other public purposes. (As amended Stats. 1919. p. 839.)

SEC. 5. Whenever the board believes that private land should be purchased for settlement under this act, it shall give notice by publication in one or more newspapers of general circulation in this state, setting forth approximately the area and character of the land desired and the conditions that shall govern the proposed purchase, and inviting owners of land willing to enter into a contract of sale on the conditions proposed to submit such land for inspection. (As amended Stats. 1919. p. 840.)

SEC. 6. Within thirty days thereafter the board shall direct an officer or officers in its employ, or one or more persons who may at its request be designated by the dean of the college of agriculture of the University of California, to inspect and report on all tracts of land suitable for closer settlement which are so submitted.

SEC. 7. The board shall give not less than one week's notice of the approximate date when tracts submitted will be inspected and every report of such inspection shall as far as practicable specify the —

(*a*) Situation and brief description thereof;

(*b*) Extent and situation of land comprising so much of any tract as it is proposed to acquire;

(*c*) Names and addresses of the owners thereof;

(*d*) Character of water rights;

(*e*) Nature of improvements;

(*f*) Crops being grown on land;

(*g*) Appraisement of value of land, water rights and improvements.

Sec. 8. On receiving the reports on all of the land examined the board shall decide which of the areas is best suited to the purpose of this act. Before so deciding the board may examine the land, or it may employ one or more competent valuers to fix the productive value of the land and report the same in writing; the owner or his agent may give evidence as to its value.

Sec. 9. If from the evidence submitted or from the results of its personal inspection, the board is satisfied that one or more of the tracts submitted are suited to intensive, closer settlement and can be acquired at a reasonable price, it shall submit to the governor its report, giving the reasons for recommending the purchase, and on the approval of the governor the board shall be authorized to purchase the same; *provided,* that before such purchase is made, the attorney general shall approve the title of such lands and any water rights appurtenant thereto, and the state water commission shall certify in writing as to the sufficiency of any water rights to be conveyed. (As amended Stats. 1919, p. 840.)

Sec. 10. All sales to settlers of land under this act shall be made under such terms and conditions as shall give to the board full control of any subdivisions thereof until all moneys advanced by the state for the purchase, improvement, or equipment of such subdivisions are fully repaid, together with interest thereon as herein provided. (As amended Stats. 1919, p. 840.)

Sec. 11. Immediately upon taking possession of any land purchased as above, and after deducting any areas to be set aside for townsites or public purposes in accordance with section four of this act, the board shall subdivide it into areas suitable for farms and farm laborer's allotments, and lay out, and where necessary, construct roads, ditches, and drains for giving access to and insuring the proper cultivation of the several farms and allotments. The board, prior to disposing of it to settlers, or at any time after such land has been disposed of, but not after the end of the fifth year from the commencement of the term of the settler's purchase contract, may —

(*a*) Prepare all or any part of such land for irrigation and cultivation;

(*b*) Seed, plant, or fence such land, and cause dwelling houses and outbuildings to be erected on any farm allotment or make any other improvements not specified above necessary to render the allotment habitable and productive in advance of or after settlement, the total cost to the board of such dwellings, outbuildings, and improvements not to exceed one thousand five hundred ($1,500) dollars on any one farm allotment;

(*c*) Cause cottages to be erected on any farm laborer's allotment and provide a domestic water supply, the combined cost to the board of the cottage and water supply not to exceed eight hundred ($800) dollars on any one farm laborer's allotment;

(*d*) Make loans to approved settlers on the security of permanent improvements, stock and farm implements, such loans to be secured by mortgage or mortgages, deed or deeds of trust on such permanent improvements, stock or farm implements, and the total amount of any such loan, together with money spent by the board on improvements as above specified, not to exceed three thousand dollars on any one farm allotment, or two thousand dollars on any one farm laborer's allotment. (As amended, Stats. 1919, p. 840.)

SEC. 12. Authority is hereby granted to the board, where deemed desirable, to operate and maintain any irrigation works constructed to serve any lands purchased and sold under the provisions of this act. All moneys received in tolls or charges for the operation and maintenance of any works or for any water supplied therefrom, shall be deposited in the land settlement fund created by this act and shall become available for the payment of any costs, expenses, or other charges authorized in this act to be paid from said land settlement fund.

SEC. 13. After the purchase of land by the board under the provisions of this act and before its disposal to approved bona fide applicants the board shall have authority to lease such land or a part thereof on bonded or secured lease on such terms as it shall deem fit.

SEC. 14. Lands disposed of under this act, other than lands set aside for townsites or public purposes, shall be sold either as farm allotments, each of which shall have a value not exceeding, without improvements, fifteen thousand dollars, or as farm laborers' allotments, each of which shall have a value not exceeding, without improvements, one thousand dollars. Before any part of an area is thrown open for settlement there shall be public notice thereof once a week for four weeks in one or more daily newspapers of general circulation in the state, setting forth the number and size of farm allotments or farm laborer's allotments, or both, the prices at which they are offered for sale, the minimum amount of capital a settler will be required to have, the mode of payment, the amount of cash payment required, and such other particulars as the board may think proper and specifying a definite period within which applications therefor shall be filed with the board on forms provided by the board. The board shall have the right in its uncontrolled discretion to reject any or all applications it may see fit and may readvertise as aforesaid as often as it sees fit until it receives and accepts such number of applications as it may deem necessary.

If no applications satisfactory to the board are received for any farm allotment or farm laborer's allotment following such advertising, the board at any time prior to readvertising, may sell any such farm allotment or farm laborer's allotment at the prices at which they were so offered for sale, without the necessity of readvertising.

The board shall also have the power in dealing with any such farm allotments or farm laborer's allotments for which there has been no such application satisfactory to the board, to subdivide or amalgamate any one or more of such allotments as it may see fit, and fix the prices thereon, provided that the limitations of fifteen thousand dollars for a farm allotment and one thousand dollars for the farm laborer's allotment, as in this section set forth, are not violated. Such subdivision or amalgamation may be had without the necessity of readvertising.

The board may also sell at public auction, under such conditions of sale and notice thereof as the board may prescribe, any areas which the board may determine are not suitable for farm allotments or farm laborer's allotments, whether or not included in any subdivision into farm allotments or farm laborer's allotments; *provided,* that if such area has been included in such a farm allotment or farm laborer's allotment, then such sale at public auction can be made only after a failure to receive any application satisfactory to the board after the advertising thereof, as required by the terms of this section. (As amended, Stats. 1919, p. 841.)

SEC. 15. Any citizen of the United States, or any person who has declared his intention of becoming a citizen of the United States, and who is not the holder of agricultural land or of possessory rights thereto to the value of fifteen thousand dollars, and who by this purchase would not become the holder of agricultural land or of possessory rights thereto exceeding such value, and who is prepared to enter within six months upon actual occupation of the land acquired, may apply for and become the purchaser of either a farm allotment or a farm laborer's allotment; *provided,* that no more than one farm allotment or more than one farm laborer's allotment shall be sold to any one person; *provided, further,* that no applicant shall be approved who shall not satisfy the board as to his or her fitness successfully to cultivate and develop the allotment applied for.

The board may, in offering for sale farm allotments or farm laborer's allotments, coöperate or contract with the duly authorized representatives of the United States government and other public corporations or agencies generally. The board is hereby authorized to perform all acts necessary to coöperate fully with the agencies of the United States engaged in work of similar character, and with similar boards and agencies of other states. In any such sales made in coöperation with such representatives or agencies of the United States government, preference must be given to soldiers, sailors, marines and others who have served with the armed forces of the United States in the European war or other wars of the United States, including former American citizens who served in allied armies against the central powers, and have been repatriated, and who have been honorably discharged. The board may likewise, whether or not acting in coöperation with the duly authorized representatives of the United States government, give such preference to any of such citizens of California, who as soldiers, sailors, marines and others have served with the armed forces of the United States, as in this section described. (As amended, Stats. 1919, p. 842.)

SEC. 16. Within ten days after the final date set for receiving applications for either farm allotments or farm laborer's allotments the board shall meet to consider the applications, and may request applicants to appear in person; *provided,* that the board shall have the power and the uncontrolled discretion to reject any or all applications.

SEC. 17. The selling prices of the several allotments into which lands purchased under this act are subdivided, other than those set aside for townsite and public purposes, shall be fixed by the board, so as to render such allotments as nearly as possible equally attractive, and calculated to return to the state the original cost of the land, together with a sufficient sum added thereto to cover all expenses and costs of surveying, improving, subdividing, and selling such lands, including the payment of interest, and all costs of engineering, superintendence, and administration, including the cost of operating any works built, directly chargeable to such land, and also the price of so much land as shall on subdivision be used for roads and other public purposes, and also such sum as shall be deemed necessary to meet unforeseen contingencies.

SEC. 18. Every approved applicant shall enter into a contract of purchase with the board, which contract shall among other things provide that the purchaser shall pay as a cash deposit a sum equal to five per cent of the sale price of the allotment and in addition not less than ten per cent of the cost of any improvements made thereon, and such applicant shall, if required by the board, enter into an agreement to apply for a loan from the federal land bank under provisions of the federal farm loan act for an amount to be fixed by the board, and shall pay to the board the amount of any loan so made as a partial payment on such land and improvements. The balance due on the land shall be paid in amortizing payments extending over a period to be fixed by the board, not exceeding forty years, together with interest thereon at the rate of five per cent per annum. The amount due on improvements shall be paid in amortizing payments extending over a period to be fixed by the board not exceeding twenty years, together with interest thereon at the rate of five per cent per annum. The repayment of loans made on live stock or implements shall extend over a period to be fixed by the board not exceeding five years; *provided, however,* in each case, that the settler shall have the right on any installment date, to pay any or all installments still remaining unpaid. (As amended, Stats. 1919, p. 843.)

SEC. 19. The number and amount of yearly or half yearly installments of principal and interest to be paid to the board under contracts of purchase shall be calculated according to any table adopted or approved by the federal farm loan board.

SEC. 20. Every contract entered into between the board and an approved purchaser shall contain among other things provisions that the purchaser shall cultivate the land in a manner to be approved by the board and shall keep in good order and repair all buildings, fences, and other permanent improvements situated on his allotment, reasonable wear and tear and damage by fire excepted. Each settler shall, if required, insure and keep insured against fire all buildings on his allotment, the policies therefor to be made out in favor of the board and to be in such amount or amounts and in such insurance companies as may be prescribed by the board.

The board shall have power in its own name to insure and keep insured against fire all buildings or other improvements on any of the lands under the control of the board, and any contract of insurance heretofore made by the board is hereby ratified and confirmed. The board shall likewise have the power in any contract of purchase under which the board purchases lands as authorized in this act, to provide for the return by the board to the owner so selling to the state of any insurance premiums or taxes which may have been paid on said property by such owner, or for which such owner may have become obligated to pay, and any such agreement or contract of purchase heretofore made by the board is hereby ratified and confirmed. (As amended, Stats. 1919, p. 843.)

Sec. 21. No allotment sold under the provisions of this act shall be transferred, assigned, mortgaged, or sublet in whole or in part, without the consent of the board given in writing, until the settler has paid for his farm allotment or farm laborer's allotment in full and complied with all of the terms and conditions of his contract of purchase. (As amended, Stats. 1919, p. 844.)

Sec. 22. In the event of a failure of a settler to comply with any of the terms of his contract of purchase and agreement with the board, the state and the board shall have the right at its option to cancel the said contract of purchase and agreement and thereupon shall be released from all obligation in law or equity to convey the property and the settler shall forfeit all right thereto and all payments theretofore made shall be deemed to be rental paid for occupancy. The board may require of the settler such mortgage or deed of trust or other instrument as may be necessary under the terms and conditions of the contract of purchase in order to adequately protect and secure the board. There may be included in such contract of purchase, mortgage, deed of trust or other instrument any conditions with reference to sale of the property or reconveyance back to the board or notice of such sale or reconveyance as may in the discretion of the board be required to be so included in such contract of purchase, mortgage, deed of trust or other instrument, in order to so adequately protect the said board in the premises; and any such contracts of purchase, mortgages, deeds of trust or other instruments heretofore executed are hereby confirmed. The failure of the board or of the state to exercise any option to cancel, or other privilege under the contract of purchase for any default shall not be deemed as a waiver of the right to exercise the option to cancel or other privilege under the contract of purchase for any default thereafter on the settler's part. But no forfeiture so occasioned by default on the part of the settler shall be deemed in any way or to any extent, to impair the lien and security of the mortgage or trust instrument securing any loan that it may have made as in this act provided. The board shall have the right and power to enter into a contract of purchase for the sale and disposition of any land forfeited as above provided, because of default on the part of a settler, and this right may be exercised indefinitely without the necessity of advertising. (Added Stats. 1919, p. 845.)

SEC. 23. Actual residence on any allotment sold under the provisions of this act shall commence within six months from the date of the approval of the application and shall continue for at least eight months in each calendar year for at least ten years from the date of the approval of the said application, unless prevented by illness or some other cause satisfactory to the board; *provided,* that in case any farm allotment disposed of under this act is returned to and resold by the state, the time of residence of the preceding purchaser may in the discretion of the board be credited to the subsequent purchaser.

SEC. 24. The power of eminent domain shall be exercised by the state at the request of the board for the condemnation of water rights and rights of way for roads, canals, ditches, dams, and reservoirs necessary or desirable for carrying out the provisions of this act, and on request of the board the attorney general shall bring the necessary and appropriate proceedings authorized by law for such condemnation of said water rights or rights of way, and the cost of all water rights or rights of way so condemned shall be paid out of the land settlement fund hereinafter provided for. The board shall have full authority to appropriate water under the laws of the state when such appropriation is necessary or desirable for carrying out the purposes of this act.

SEC. 25. For the purpose of carrying out the provisions of this act the sum of two hundred sixty thousand dollars is hereby appropriated out of any moneys in the state treasury not otherwise appropriated. Of this amount, the sum of two hundred fifty thousand dollars shall constitute a revolving fund to be known as the "land settlement fund," which is calculated to be returned to the state with interest at the rate of four per cent per annum within a period of fifty years from the date of the passage of this act, on the daily balances representing the amounts drawn out of such fund and thus depleting the fund to an amount less than said sum of two hundred fifty thousand dollars, which said daily balances shall be so calculated only on the amounts so drawn out of such fund, from the date of the passage of this act. The remaining ten thousand dollars shall constitute a fund available for the payment of administrative expenses alone until such time as other moneys are available for such purpose from the sales of land as provided for in this act. (As amended, Stats. 1919, p. 844.)

SEC. 26. The state board of control is hereby authorized to provide for advances of money to the board needed to meet contingent expenses to such an amount, not exceeding five thousand dollars as the said board of control shall deem necessary.

SEC. 27. The money paid by settlers on land, improvements, or in the repayment of advances, shall be deposited in the land settlement fund and be available under the same conditions as the original appropriation. (As amended, Stats. 1919, p. 844.)

SEC. 28. The board shall have authority to make all needed rules and regulations for carrying out the provisions of this act. (As amended, Stats. 1919, p. 844.)

SEC. 29. The board is hereby authorized to investigate land settlement conditions in California and elsewhere and to submit recommendations for such legislation as may be deemed by it necessary or desirable.

The board shall render an annual report to the governor and a copy thereof to the secretary of the interior, which report shall be filed and printed as required by sections three hundred thirty-two, three hundred thirty-three, three hundred thirty-four, three hundred thirty-six and three hundred thirty-seven of the Political Code, with the exception that they shall be so filed and printed annually instead of biennially, as provided in said sections. (As amended, Stats. 1919, p. 844.)

SEC. 30. The act of the legislature entitled "An act providing for the appointment of a commission to investigate and report at the forty-second session of the legislature relative to the adoption of a system of land colonization and rural credits and making an appropriation therefor, approved May 17, 1915, is hereby repealed.

SEC. 31. This act may be known and cited as the "land settlement act."

Section 17 of the amending act of 1919 reads as follows: (Stats. 1919, p. 845.)

For the purpose of carrying out the provisions of this act and of the act amended by this act, the sum of one million dollars is hereby appropriated out of any moneys in the state treasury not otherwise appropriated, which sum of one million dollars is calculated to be returned to the state within a period of fifty years from the date of this appropriation of one million dollars going into effect, with interest at the rate of four per cent per annum on the daily balances representing the amounts drawn out of such appropriation, and thus depleting the appropriation to an amount less than said sum of one million dollars. The state controller is hereby authorized and directed to draw warrants upon such funds from time to time upon requisition of the board approved by the state board of control, and the state treasurer is hereby authorized and directed to pay such warrants.

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